



April 13, 2026

David Budy
Sentinel Peak Resources CA LLC (Sentinel)
1200 Discovery Drive
Bakersfield, CA 93309

Re: Notice of Preliminary Decision – Title V Permit Renewal
Facility Number: S-1372
Project Number: S-1204088

Dear Mr. Budy:

Enclosed for your review and comment is the District's analysis of the application to renew the Federally Mandated Operating Permit for Sentinel Peak Resources CA LLC (Sentinel) at Sentinel's Heavy Oil Western Stationary Source.

The notice of preliminary decision for this project has been posted on the District's website (www.valleyair.org). After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the renewed Federally Mandated Operating Permit. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions, please contact Ms. Erin Scott, Permit Services Manager, at (661) 392-5500.

Sincerely,

Brian Clements
Director of Permit Services

Enclosures

cc: Courtney Graham, CARB (w/enclosure) via email
cc: EPA Region 9 Air Permitting Manager (w/enclosure) via EPS

Samir Sheikh
Executive Director/Air Pollution Control Officer

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4800 Enterprise Way
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**SAN JOAQUIN VALLEY
AIR POLLUTION CONTROL DISTRICT**

**Proposed Title V Permit Renewal Evaluation
Sentinel Peak Resources CA LLC
S-1372**

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TITLE V PERMIT RENEWAL EVALUATION

Crude Oil and Natural Gas Production

Engineer: Marissa Mak
Date: March 23, 2026

Facility Number: S-1372
Facility Name: Sentinel Peak Resources CA LLC
Mailing Address: 1200 Discovery Drive, Suite 500
Bakersfield, CA 93309

Contact Name: David Budy
Phone: (661) 395-5571

Responsible Official: Daniel Taimuty
Title: Environmental Compliance Manager

Project # : 1204088
Deemed Complete: November 02, 2020

I. PROPOSAL

Sentinel Peak Resources CA LLC (Sentinel Peak), formerly Freeport-McMoRan Oil and Gas, was issued a Title V Operating Permit on June 30, 2002. As required by District Rule 2520, the applicant is requesting a permit renewal. The existing Title V permit shall be reviewed and modified to reflect all applicable District and federal rules updated, removed, or added since the issuance of the last Title V permit renewal on May 26, 2016.

The purpose of this evaluation is to provide the legal and factual basis for all updated applicable requirements and to determine if the facility will comply with these updated requirements. It also specifically identifies all additions, deletions, and/or changes made to permit conditions or equipment descriptions.

II. FACILITY LOCATION

Sentinel Peak, S-1372, is located in the Heavy Oil Western Oil Fields, primarily in the Cymric, Midway Sunset and South Belridge Fields, near Taft, in Kern County.

III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is included as Attachment C. Equipment consists of wells, steam generators, flares, tanks, related implements, a gasoline

dispensing operation and cogeneration units. There are no internal combustion engines permitted at this facility.

IV. GENERAL PERMIT TEMPLATE USAGE

The applicant does not propose to use any general permit templates. However, the Umbrella Permit UM-03 is currently in use and will be retained in the facility-wide conditions to ensure compliance.

V. SCOPE OF EPA AND PUBLIC REVIEW

The applicant is not requesting any model general permit templates. Therefore, all federally enforceable conditions in this current Title V permit will be subject to EPA and public review.

VI. FEDERALLY ENFORCEABLE REQUIREMENTS

A. Rules Updated Since May 26, 2016

- District Rule 2201, New and Modified Stationary Source Review Rule (amended April 20, 2023)
- District Rule 2520, Federally Mandated Operating Permits (amended June 20, 2024)
- District Rule 4306, Boilers, Steam Generators and Process Heaters - Phase 3 (amended December 17, 2020)
- District Rule 4311, Flares (amended December 17, 2020)
- District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters greater than 5.0 MMBtu/hr (amended December 17, 2020)
- District Rule 4401, Steam-Enhanced Crude Oil Production Wells (amended June 15, 2023)
- District Rule 4601, Architectural Coatings (amended April 16, 2020)
- District Rule 4623, Storage Of Organic Liquids (amended June 15, 2023)
- District Rule 8051, Open Areas (amended September 21, 2023)
- 40 CFR Part 60, Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution
- 40 CFR Part 64, Compliance Assurance Monitoring
- 40 CFR Part 82, Subpart F, Stratospheric Ozone

B. Rules Removed

- Fresno County Rule 110, Equipment Breakdown (SIP approved 8/22/1977 ⇒ Rescinded from the SIP 3/28/2024)

- Kern County Rule 111 - Equipment Breakdown (SIP approved October 24, 1980 ⇒ Removed from the SIP March 28, 2024 (89 FR 14412, February 27, 2024))
- Kings County Rule 111, Equipment Breakdown (SIP approved, last amended 6/18/1982 ⇒ Rescinded from the SIP 3/28/2024)
- Madera County Rule 113, Equipment Breakdown (SIP approved 11/18/1983 ⇒ Rescinded from the SIP 3/28/2024)
- Merced County Rule 109, Equipment Breakdown (SIP approved 6/18/1982 ⇒ Not applicable to facilities outside of Merced County)
- San Joaquin County Rule 110, Equipment Breakdown (SIP approved 12/5/1984 ⇒ Not applicable to facilities outside of San Joaquin County)
- Stanislaus County Rule 110, Equipment Breakdown (SIP approved 6/1/1983 ⇒ Rescinded from the SIP 3/28/2024)
- Tulare County Rule 111, Equipment Breakdown (SIP approved 8/22/1977 ⇒ Rescinded from the SIP 3/28/2024)

The County Rules define a breakdown condition and the procedures to follow if one occurs. Procedures for corrective actions, the issuance of an emergency variance, and reporting requirements were also specified.

In accordance with the EPA SIP call directing state and local agencies to remove rules governing emissions associated with startup, shutdown and malfunction (SSM) events from their SIPs, on February 17, 2022, the District approved submittal of a formal request to EPA and the California Air Resources Board (ARB) to withdraw the following Equipment Breakdown rules from the San Joaquin Valley's SIP: Fresno County Rule 110, Kern County Rule 111, Kings County Rule 111, Madera County Rule 113, Merced County Rule 109, San Joaquin County Rule 110, Stanislaus County Rule 110, and Tulare County Rule 111. On February 27, 2024, EPA published the final action to remove these county rules from the SIP, effective March 28, 2024.

As a result of the EPA's action to remove the County rules from the SIP, conditions 1 and 2 of the proposed requirements of the facility-wide permit S-1372-0-4, which were federally enforceable through the County rules, are no longer federally enforceable. In addition, reference to the permit shield for the County rules was removed from the proposed requirements of the facility-wide permit S-1372-0-4.

The following conditions are based solely on this rule and are therefore not federally enforceable through Title V.

Permit Unit #	Permit Description	Condition #s
S-1372-0-4	Facility-Wide Permit	1 & 2

- District Rule 2040, Applications (amended December 17, 1992, adopted into the SIP September 21, 1999 ⇒ Rescinded from the SIP December 16, 2004)

District Rule 2040 was adopted into the State Implementation Plan (SIP) September 21, 1999. However, effective December 16, 2004, as a correction to California's SIP, EPA removed Rule 2040 as well as rules from over 30 California air districts that solely concerned administrative actions, local fees, enforcement authorities, variances, and hearing board procedures. Therefore, the federal enforceability designation will be removed from condition #7 on the proposed facility-wide permit:

- Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] ~~Federally Enforceable Through Title V Permit~~

In addition, reference to Rule 2040 in the permit shield condition, #40, shall be removed.

C. Rules Added Since May 26, 2016

No District Rules have been added since the last Title V permit renewal.

D. Rules Not Updated Since May 26, 2016

- District Rule 1070, Inspections (amended December 17, 1992)
- District Rule 1100, Equipment Breakdown (amended December 17, 1992) (Non SIP replacement for Kern County Rule 111)

District Rule 1100 defines a breakdown condition and the procedures to follow if one occurs. The corrective action, the issuance of an emergency variance, and the reporting requirements are also specified.

District Rule 1100 was last amended on December 17, 1992 and is not included in the SIP; however, the requirements of District Rule 1100 were previously federally enforceable in Kern County through Kern County Rule 111, which was removed from the SIP effective March 28, 2024. Because Kern County Rule 111 was removed from the SIP, conditions 1 and 2 of the facility-wide permit S-1372-0 are no longer federally enforceable.

In addition, reference to the permit shield for District Rule 1100 was removed from the proposed requirements of the facility-wide permit S-1372-0-4 in condition 40. Condition 11 of the proposed facility-wide permit S-1372-0-3, which requires reporting of deviations from permit conditions and references District Rules 1100 and 2520, remains federally enforceable through District Rule 2520.

- District Rule 1160, Emission Statements (adopted November 18, 1992)
- District Rule 1081, Source Sampling (amended December 16, 1993)
- District Rule 2010, Permits Required (amended December 17, 1992)
- District Rule 2020, Exemptions (amended December 18, 2014)
- District Rule 2031, Transfer of Permits (amended December 17, 1992)
- District Rule 2040, Applications (amended December 17, 1992)
- District Rule 2070, Standards for Granting Applications (amended December 17, 1992)
- District Rule 2080, Conditional Approval (amended December 17, 1992)
- District Rule 2410, Prevention of Significant Deterioration (effective November 26, 2012)
- District Rule 4101, Visible Emissions (amended February 17, 2005)
- District Rule 4201, Particulate Matter Concentration (amended December 17, 1992)
- District Rule 4301, Fuel Burning Equipment (amended December 17, 1992)
- District Rule 4305, Boilers, Steam Generators and Process Heaters - Phase 2 (amended August 21, 2003)
- District Rule 4406, Sulfur Compounds from Oilfield Steam Generators - Kern County (amended December 17, 1992)
- District Rule 4621, Gasoline Transfer Into Stationary Storage Containers, Delivery Vessels, And Bulk Plants (amended December 19, 2013)
- District Rule 4622, Gasoline Transfer Into Motor Vehicle Fuel Tanks (amended December 19, 2013)
- District Rule 4703, Stationary Gas Turbines (amended September 20, 2007)
- District Rule 4801, Sulfur Compounds (amended December 17, 1992)
- District Rule 8011, General Requirements (amended August 19, 2004)
- District Rule 8021, Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities (amended August 19, 2004)
- District Rule 8031, Bulk Materials (amended August 19, 2004)
- District Rule 8041, Carryout and Trackout (amended August 19, 2004)
- District Rule 8061, Paved and Unpaved Roads (amended August 19, 2004)
- District Rule 8071, Unpaved Vehicle/Equipment Traffic Areas (amended September 16, 2004)
- 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos

VII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE

For each Title V source, the District issues a single permit that contains the Federally Enforceable requirements, as well as the District-only requirements. The District-only requirements are not a part of the Title V Operating Permits. The terms and conditions that are part of the facility's Title V permit are designated as "Federally Enforceable Through Title V Permit".

For this facility, the following are not federally enforceable and will not be discussed beyond this section.

A. Rules Added, Updated, or Evaluated

No rules have been added, updated, or evaluated since the last TV renewal.

B. Rules Not Updated

1. District Rule 1160 – Emission Statements

The purpose of this rule is to provide the District with an accurate accounting of emissions from significant sources with which the District and ARB can compile an accurate inventory.

The following condition is based on this rule and is therefore not federally enforceable through Title V permit:

Permit Unit	Condition #s
S-1372-0-4	3

2. District Rule 4102 – Nuisance

This rule prevents the discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property.

The following conditions are based on this rule and is therefore not federally enforceable through Title V permit:

Permit Unit	Condition #s
S-1372-0-3	45
S-1372-87-18	6
S-1372-111-16	7
S-1372-186-10	5
S-1372-187-16	10
S-1372-188-15	10
S-1372-371-8	7
S-1372-372-10	9
S-1372-373-10	9
S-1372-376-10	7
S-1372-378-6	1
S-1372-379-6	1
S-1372-395-3	2
S-1372-411-4	12, 26, 27
S-1372-412-1	1
S-1372-413-1	18
S-1372-413-1	19
S-1372-414-3	1, 19, 20
S-1372-417-2	2
S-1372-418-2	1
S-1372-504-2	9

VIII. PERMIT REQUIREMENTS

The purpose of this evaluation is to review changes to federally enforceable requirements. Therefore, this compliance section will address rules that have been amended or added since the issuance of the last Title V permit renewal. In addition, several of the permits for this facility have been revised to reflect the most recent and complete conditions set forth in District Rules.

District Rules

A. Fresno County Rule 110, Stanislaus County Rule 110, San Joaquin County Rule 110, Merced County Rule 109, Madera County Rule 113, Kern County Rule 111, Kings County Rule 111, and Tulare County Rule 111 - Equipment Breakdown

In accordance with EPA's State Implementation Plan (SIP) Call, on February 17, 2022, the District rescinded Fresno County Rule 110, Kern County Rule 111, Kings County Rule 111, Madera County Rule 113, Stanislaus County Rule 110, and Tulare County Rule 111 from the San Joaquin Valley SIP.

Therefore, proposed conditions #1 and 2 on draft facility-wide permit S-1372-0-4 are no longer Federally Enforceable due to the removal of all county rules as shown below.

- {4362} The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; ~~County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)~~] Y
- {4363} The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; ~~County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)~~] Y

B. District Rule 2201, New and Modified Stationary Source Review Rule

District Rule 2201 has been amended since this facility's last Title V permit renewal was issued. However, the requirements of this rule are only triggered at the time the source undergoes a modification. All applicable requirements from any NSR permit actions have already been incorporated into the current Title V permit, except for the terms from projects S-1221522 and S-1241199 which are being included as part of this Title V permit renewal (see explanation below).

Projects S-1221522 and S-1241199 was subject to the NSR Rule and the Authorities to Construct issued in that project are being incorporated into the Title V permit as part of this Title V Renewal. As a result, the following NSR terms are being incorporated into the Title V permit within this renewal:

- Conditions 5, 11, 29 from ATC S-1372-541-1 have been included in the proposed Title V permit.
- Conditions 3 through 8 from ATC S-1372-536-3 have been included in the proposed Title V permit.

C. District Rule 2520, Federally Mandated Operating Permits

This rule has been amended since this TV permit was initially issued, but the last amended version of the rule is not SIP approved. Additionally, the amendments to this rule do not have any effect on current permit requirements. However, only greenhouse gas emissions will be addressed under Rule 2520 during this renewal.

Greenhouse Gas Discussion

There are no federally applicable Greenhouse Gas (GHG) requirements for this source. It should be noted that the Mandatory Greenhouse Gas Reporting rule (40 CFR Part 98) is not included in the definition of an applicable requirement within Title V (per 40 CFR 71.2). Therefore, there will be no further discussion of GHG in this evaluation.

D. District Rule 4306 - Boilers, Steam Generators, and Process Heaters - Phase 3

The purpose of this rule is to limit the emissions of oxides of nitrogen (NO_x) and carbon monoxide (CO) from boilers, steam generators, and process heaters. This rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input greater than 5 million Btu per hour.

District Rule 4306 was amended on December 17, 2020. However, the amended rule is not SIP-approved by EPA. The previous version of this rule (amended October 16, 2008) is SIP-approved and was addressed by a past TV permit renewal by the District that was finalized in 2016. The December 17, 2020 amendment to this rule consisted of the lowering of the NO_x emissions limits for multiple classes and categories of units, clarifications to definitions, and updates to test methods. Based on these amendments to the SIP approved rule, the amended rule is as stringent as, if not more stringent, than the SIP approved version of the rule. The following discussion will solely focus on Sections 5.1.1 and 6.2.1 in which the applicable new requirements were added in the most recent amendment to this rule.

Section 5.1.1 of the rule requires the units to comply with the applicable NO_x and CO emissions limits specified in Table 2 on and after December 31, 2023. The applicable category of the table is listed below:

Table 2: Tier 2 NO _x and CO Limits				
Category	Operated on Gaseous Fuel		Operated on Liquid Fuel	
	NO _x Limit	CO Limit (ppmv)	NO _x Limit	CO Limit (ppmv)
A. Units with a total rated heat input > 5.0 MMBtu/hr to ≤ 20.0 MMBtu/hr, except for Categories C through E unit				
1. Fire Tube Boilers	7 ppmv or 0.0085 lb/MMBtu	400	40 ppmv or 0.052 lb/MMBtu	400
2. Units at Schools	9 ppmv or 0.011 lb/MMBtu	400	40 ppmv or 0.052 lb/MMBtu	400
3. Units fired on Digester Gas	9 ppmv or 0.011 lb/MMBtu	400	40 ppmv or 0.052 lb/MMBtu	400
4. Thermal Fluid Heaters	9 ppmv or 0.011 lb/MMBtu	400	40 ppmv or 0.052 lb/MMBtu	400
5. All other units	9 ppmv or 0.011 lb/MMBtu	400	40 ppmv or 0.052 lb/MMBtu	400

Table 2: Tier 2 NOx and CO Limits				
Category	Operated on Gaseous Fuel		Operated on Liquid Fuel	
	NOx Limit	CO Limit (ppmv)	NOx Limit	CO Limit (ppmv)
C. Oilfield Steam Generators				
1. Units with a total rated heat input > 5.0 MMBtu/hr and ≤ 20.0 MMBtu/hr	9 ppmv or 0.011 lb/MMBtu	400	40 ppmv or 0.052 lb/MMBtu	400
2. Units with a total rated heat input > 20.0 MMBtu/hr and ≤ 75.0 MMBtu/hr	9 ppmv or 0.011 lb/MMBtu	400	40 ppmv or 0.052 lb/MMBtu	400
3. Units with a total rated heat input > 75.0 MMBtu/hr	7 ppmv or 0.0085 lb/MMBtu	400	40 ppmv or 0.052 lb/MMBtu	400
4. Units firing on less than 50%, by volume, PUC quality gas	15 ppmv or 0.018 lb/MMBtu	400	40 ppmv or 0.052 lb/MMBtu	400

The following heater is subject to Category 2.A.5 of Table 2:

S-1372-139-12: 10.0 MMBTU/HR NATURAL GAS/LPG FIRED HEATER TREATER #1 (#25118) WITH TWO 5 MMBTU/HR KVAERNER-ZINK LOW NOX FORCED DRAFT BURNERS AND FLUE GAS RECIRCULATION, FUEL INDUCED FLUE GAS RECIRCULATION, TWO STACKS AND PLC AUTOMATED CONTROLS

The following steam generators and heaters are subject to Category C.1 of Table 2:

S-1372-146-9: 8 MMBTU/HR NATURAL GAS FIRED HEATER TREATER OPERATING AS AN UNFIRED FREE WATER KNOCKOUT (#2) (#10290)

S-1372-429-0: 18 MMBTU/HR LPG OR NATURAL GAS-FIRED STEAM GENERATOR

S-1372-479-0: 19.0 MMBTU/HR NATURAL GAS/PROPANE-FIRED STEAM GENERATOR WITH GIDEON MODEL MGW-25R1 ULTRA LOW NOX BURNER

S-1372-483-0: 10 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH TWO SEPARATE 5.0 MMBTU/HR LOW NOX BURNERS CONNECTED TO VAPOR CONTROL SYSTEM S-1372-480

S-1372-486-0: 20 MMBTU/HR TEOR GAS AND NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE MODEL 4211-21/X1288 LOW NOX BURNER

S-1372-488-0: 20.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH ACT GIDEON MGW-25 LOW NOX BURNER AND INDUCED FLUE GAS

RECIRCULATION OPERATED AT VARIOUS SPECIFIED LOCATIONS WITHIN THE STATIONARY SOURCE

S-1372-500-0: 10 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO 5.0 ULTRA LOW-NOX MMBTU/HR BURNERS

S-1372-503-0: 10 MMBTU/HR GAS-FIRED C.E. NATCO M&M HEATER TREATER #3 WITH TWO 5.0 ULTRA LOW-NOX MMBTU/HR BURNERS

S-1372-505-0: 12.6 MMBTU/HR NATURAL GAS-FIRED TRICO SUPERIOR MODEL X-4398 HEATER TREATER V-3 WITH TWO 6.3 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS

S-1372-507-0: 10 MMBTU/HR NATURAL GAS-FIRED H.T.I. M&M HEATER TREATER #3 WITH TWO MAXON MODEL XPO EB ULTRA LOW NOX BURNERS OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-1372

S-1372-508-0: 10 MMBTU/HR NATURAL GAS-FIRED H.T.I. HEATER TREATER #4, SA# 0392 WITH DORMANT BURNERS, FUNCTIONING AS AN EXEMPT FWKO PRESSURE VESSEL WHILE THE BURNERS ARE DORMANT

S-1372-525-0: 12.3 MMBTU/HR NATURAL GAS-FIRED NATCO MODEL VFH-RM, SERIAL NO. ELIN22901-01 HEATER TREATER V-1 WITH TWO 6.15 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS WITH VAPOR RECOVERY PIPING TO S-1372-521

S-1372-526-0: 12.3 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER V-2 WITH TWO 6.15 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS WITH VAPOR RECOVERY PIPING TO S-1372-521

All the above units, except for permits S-1372-139-12, '-146-9, '-429-0 '-486-0 and '-508-0, are in compliance with the applicable emissions limits of Table 2. The permits not meeting the requirements of Table 2 are, in some form, prohibited from operating until they are modified to comply with all District Rules:

- Permit S-1372-139-12 has been designated as a non-compliant dormant emissions unit (DEU).
- Permit '-146-9 restricts the use of the burners until modifications are made comply with all District rules. The permit currently allows the heater treater to be operated as an unfired free water knockout pressure vessel.
- Permit '-429-0 has been designated as a non-compliant DEU.
- Permit '-486-0 has been designated as a compliant DEU.
- Permit '-508-0 has been designated as a non-compliant DEU and, in the meantime, is permitted to only operate as a free water knockout pressure vessel.

Upon review, unit '-486-0 is no longer a compliant DEU. Therefore, the following condition will be added to its permit to designate it as a non-compliant dormant emissions unit:

- *Operation of the unit is not authorized until modifications are made to comply with all District Rules as authorized by an Authority to Construct. [District Rule 2010]*

The following steam generators are subject to the limits of Category C.2 of Table 2:

S-1372-2-30: 32.0 MMBTU/HR TEOR/NATURAL GAS-FIRED STEAM GENERATOR #5 (DIS #44826-70) WITH NORTH AMERICAN MAGNA-FLAME 4211-32-LE LOW-NOX BURNER WITH FGR AND O2 CONTROLLER (GAMBLE LEASE)

S-1372-4-25: 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#4) (DIS #44784-67) WITH NORTH AMERICAN MAGNA-FLAME 4211-25-LE LOW-NOX BURNER WITH FGR AND O2 CONTROLLER (GAMBLE LEASE)

S-1372-8-32: 32 MMBTU/HR J.F. NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#10) (DIS# 44510-76) WITH NORTH AMERICAN LOW NOX BURNER, FGR, AND O2 CONTROLLER (E&M LEASE)

S-1372-10-24: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#11) (DIS# 44511-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER (BREMER LEASE)

S-1372-13-29: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#16) (DIS# 12667-79) EQUIPPED WITH A NORTH AMERICAN G-LE ULTRA LOW-NOX BURNER, FGR AND O2 CONTROLLER

S-1372-14-27: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#13 BREMER, DIS# 44521-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, O2 CONTROLLER AND FGR

S-1372-16-27: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#12) (DIS# 44519-76) EQUIPPED WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER AND EXHAUST GAS CONNECTED TO SCRUBBER/ESP LISTED ON S-1372-127 (MCKITTRICK FRONT LEASE)

S-1372-17-33: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#19) (DIS# 45002-80) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR

S-1372-18-27: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (#28 DIS# 45003-80) EQUIPPED WITH FLUE GAS RECIRCULATION (FGR)

S-1372-19-29: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#29) (DIS# 45004-80) EQUIPPED WITH A NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR

S-1372-20-27: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#30) (DIS# 45005-80) EQUIPPED WITH A NORTH AMERICAN, MODEL MAGNA-FLAME G-LE, LOW NOX BURNER, FGR AND O2 CONTROLLER

S-1372-24-31: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#20 DIS# 45220-81) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

S-1372-29-32: 30.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR #23 (DIS #45223-80) WITH NORTH AMERICAN MAGNA-FLAME G-LE LOW NOX BURNER, FGR, AND O2 CONTROLLER

S-1372-30-27: 62.5 MMBTU/HR NATURAL/CASING GAS-FIRED STEAM GENERATOR (#33) (DIS# 45233-82) WITH O2 CONTROLLER, LOW-NOX BURNER AND FGR

S-1372-31-27: 62.5 MMBTU/HR NATURAL GAS/CASING GAS/TANK VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#34) (DIS# 45234-82) EQUIPPED WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

S-1372-32-26: 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#35) (DIS# 45235-82) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

S-1372-33-27: 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#36) (DIS# 45236-82) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

S-1372-34-27: 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#37) (DIS# 45237-82) WITH O2 CONTROLLER, LOW NOX BURNER, AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

S-1372-111-16: 62.5 MMBTU/HR NATURAL/WASTE GAS-FIRED STEAM GENERATOR (#46) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FGR

S-1372-112-17: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#45 GAMBLE) WITH NORTH AMERICAN 4231-GLE ULTRA-LOW NOX BURNER, O2 CONTROLLER, AND FGR

S-1372-113-15: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#44) WITH NORTH AMERICAN GLE LOW NOX BURNER, O2 CONTROLLER AND FGR

S-1372-127-28: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR #43 EQUIPPED WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE LOW NOX BURNER, FGR, O2 CONTROLLER, AND EXHAUST GAS SOX SCRUBBER/ESP SHARED WITH S-1372-317 (MCKITTRICK FRONT LEASE)

S-1372-194-17: 5.0 MW COGEN FACILITY INCLUDING SOLAR TAURUS MODEL 60-T73005 GAS FIRED TURBINE ENGINE GENERATOR SET WITH SOLONOX COMBUSTORS, GAS FIRED MAXFIRE MODEL 110 SERIES DUCT BURNER, SCR, AND HEAT RECOVERY STEAM GENERATOR

S-1372-317-18: 67.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR EQUIPPED WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE LOW NOX BURNER, FGR AND EXHAUST GAS SOX SCRUBBER W/ESP SHARED WITH S-1372-127 (MCKITTRICK FRONT LEASE)

S-1372-318-11: 67.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR (HOPKINS LEASE)

S-1372-319-21: 67.5 MMBTU/HR NATURAL GAS/TEOR/TVR GAS-FIRED STEAM GENERATOR (#49) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR. OPERATING AT TWO LOCATIONS: MCKITTRICK FRONT (NW6, T30S R21E) AND HOPKINS LEASE (NW10, T29S R21E)

S-1372-329-9: 62 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

S-1372-334-23: 27.5 MMBTU/HR NATURAL GAS/WASTE GAS-FIRED STEAM GENERATOR (#56) (HSG #577) WITH FGR AND NORTH AMERICAN MAGNA-FLAME 4211 27-LE LOW-NOX BURNER OPERATED AT VARIOUS SPECIFIED LOCATIONS

S-1372-355-12: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#52) (DIS #22457-79) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR (STAR FEE LEASE)

S-1372-356-12: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22468-79) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

S-1372-357-12: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22469-79) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

S-1372-358-13: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22470-79) WITH FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

S-1372-359-10: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22632-80) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

S-1372-371-8: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH A NORTH AMERICAN MAGNA FLAME G-LE ULTRA LOW NOX BURNER, OXYGEN (O2) CONTROLLER AND FLUE GAS RECIRCULATION, OPERATED AT VARIOUS SPECIFIED LOCATIONS

S-1372-372-10: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVR GAS-FIRED (TVR SYSTEM GAS ALLOWED AT REARDON LEASE ONLY) STEAM GENERATOR (#64) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, OXYGEN (O2) CONTROLLER AND FGR

S-1372-373-10: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#65) (DIS# 28623-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FGR

S-1372-374-8: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#57) (DIS# 21939-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER

S-1372-375-6: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#58) (DIS# 28623-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

S-1372-376-10: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#59) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

S-1372-377-8: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#60) (DIS# 28618-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

S-1372-378-6: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#34) (DIS #19965-74) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

S-1372-379-6: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#37) (DIS #20623-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

S-1372-425-0: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH A NORTH AMERICAN GLE BURNER, OR EQUIVALENT, AND FLUE GAS RECIRCULATION

S-1372-463-0: 25.2 MMBTU/HR NATIONAL CO S/N S8736 NATURAL GAS/PROPANE/PRODUCTION GAS-FIRED STEAM GENERATOR WITH BURNER DIFFUSER PLATE AND FLUE GAS RECIRCULATION (FGR)

S-1372-469-0: 62.5 MMBTU/HR C.E. NATCO GAS/CASING GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE LOW-NOX BURNER AND FLUE GAS RECIRCULATION (HOPCO, H-2, DIS# 39454-87)

All the units subject to Category C.2 of Table 2 are in compliance with the emissions limit. Please note, permit S-1372-463-0 meets compliance by being designated as a non-compliant DEU.

In addition, while permit S-1372-194-17 may appear to be subject to Rule 4306, its steam generator meets the following exemption per Section 4.1.4 of Rule 4306:

Unfired or fired waste heat recovery boilers that are used to recover or augment heat from the exhaust of combustion turbines or internal combustion engines.

Therefore, the reference to Rule 4306 in condition 24 of permit '-194-17 shall be removed.

The following steam generators are subject to the limits of Category C.3 of Table 2:

S-1372-394-4: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SG #67) WITH NORTH AMERICAN GLE MODEL G ULTRA LOW NOX BURNER, FGR, AND O2 CONTROLLER

S-1372-395-3: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE MODEL G ULTRA LOW NOX BURNER, FGR, AND O2 CONTROLLER

S-1372-411-4: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME G-LE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR #68)

S-1372-413-1: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE BURNER AND A FLUE GAS RECIRCULATION SYSTEM

S-1372-414-3: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE BURNER AND A FLUE GAS RECIRCULATION SYSTEM

S-1372-417-2: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#71), WITH NORTH AMERICAN GLE ULTRA LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM (DOME)

S-1372-418-2: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN GLE ULTRA LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM (HOPKINS)

S-1372-422-1: 85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-433) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)

S-1372-423-1: 85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-434) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)

S-1372-424-1: 85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-442) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)

S-1372-436-1: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#81) WITH A NORTH AMERICAN G-LE STANDARD BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

S-1372-437-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#76) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

S-1372-438-1: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#77) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

S-1372-439-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#78) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

S-1372-440-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#79) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

S-1372-499-0: 85 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

S-1372-504-2: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STRUTHERS STEAM GENERATOR WITH LOW NOX BURNER AND O2 CONTROLLER SERVED BY AIRPOL DUAL VALVE TRAY SOX SCRUBBER WITH CHEVRON TYPE MIST ELIMINATOR AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH S-1372-504 AND '-520

S-1372-506-0: 85 MMBTU/HR STRUTHERS NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN LOW NOX BURNER AND FGR AUTHORIZED TO BE OPERATED AT VARIOUS SPECIFIED LOCATIONS

S-1372-520-0: 62.5 MMBTU/HR NATURAL/TEOR GAS FIRED STEAM GENERATOR (CUSA ID # 50-1-15A, DIS# 43005-78) WITH FLUE GAS RECIRCULATION, O2 CONTROLLER AND SO2 SCRUBBER AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH UNIT S-1372-504

S-1372-536-0: 77.6 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER

S-1372-539-0: 85 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A NORTH AMERICAN LOW-NOX LEL BURNER AUTHORIZED TO BE OPERATED AT VARIOUS SPECIFIED LOCATIONS

S-1372-541-0: 85 MMBTU/HR PCL NATURAL GAS AND WASTE GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION AUTHORIZED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

S-1372-543-0: 85 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

S-1372-545-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

All units subject to the limits of Category C.3 of Table 2 are in compliance with the emissions limits. No further discussion required for these units.

The following steam generator is limited to firing less than 50%, by volume of PUC quality gas and therefore, is subject to the limits of Category C.4 of Table 2:

S-1372-509-0: 87.7 MMBTU/HR STRUTHERS NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE BURNER, MULTIPLE LOCATIONS - M & M GENERATOR #5

Category C.4 of Table 2 has a NO_x limit of 15 ppmv. The current permit of unit '-509 has a NO_x limit of 9 ppmv. Therefore, this unit is in compliance with Table 2.

Section 6.2 specifies the source test methods to be used in demonstrating compliance with the applicable emission limits.

Section 6.2.1 states that fuel hhv shall be certified by third party fuel supplier or determined by:

6.2.1.1 ASTM D 240 or D 4809 for liquid hydrocarbon fuels;

6.2.1.2 ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels.

Conditions enforcing section 6.2.1 on all units subject to District Rule 4306 shall be updated with the latest source test methods as follows:

- *If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4306 and 4320]*

Continued compliance is expected for the rest of District Rule 4306.

E. District Rule 4311, Flares

The purpose of this Rule is to limit the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_x) from the operation of flares.

The rule was amended on December 17, 2020. The revisions include revised, removed, or added definitions and exemptions, and requirements for either annual flaring throughput limits or lower emission limits for NO_x and VOC along with compliance deadlines and recordkeeping requirements for the new limits.

Therefore, the following permits are subject to Rule 4311:

S-1372-74-19: WELL VENT VAPOR COLLECTION AND CONTROL SYSTEM, SHARED WITH VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-370, INCLUDING A 12.8 MMBTU/HR KALDAIR FLARE, 20 MMBTU/HR JOHN ZINK STANDBY FLARE, SEPARATOR(S), HEAT EXCHANGER, ONE SULFUR REMOVAL SYSTEM, KNOCKOUT DRUM(S), VAPOR RECOVERY SKID (VAPOR B), THREE PHASE SEPARATORS, COMPRESSORS, HEAT EXCHANGERS, PUMPS, AND PIPING TO THE BREMER LEASE TEOR VAPOR CONTROL SYSTEM S-1372-77 (E&M LEASE)

S-1372-76-22: TEOR OPERATION INCLUDING 162 STEAM ENHANCED WELLS, WELL VENT VAPOR COLLECTION SYSTEM, STANDBY FLARE, HEAT EXCHANGERS, SEPARATORS, COMPRESSORS, TANKS, & VAPOR PIPING TO UNITS S-1372-13, '-16, & '-24 (DOME/TUMBADOR LEASE)

S-1372-77-25: TEOR OPERATION WELL VENT VAPOR COLLECTION SYSTEM WITH 450 STEAM DRIVE WELLS, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, SULFUR REMOVAL SYSTEM, COMPRESSORS, VAPOR PIPING TO STEAM GENERATORS, 33.3 MMBTU/HR STANDBY FLARE, AND PIPING FROM THE E&M LEASE TEOR VAPOR CONTROL SYSTEM S-1372-74 (BREMER LEASE)

S-1372-87-18: TEOR OPERATION WITH WELL CASING COLLECTION SYSTEM WITH VAPOR PIPING TO UNITS S-1372-100, SERVING 98 STEAM ENHANCED WELLS, WELL COLLECTION PIPING, FLARE, NONCONDENSIBLE VAPOR PIPING TO FLARE, SULFA CHECK UNIT, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, COMPRESSORS, LUBE OIL TANKS, AND PUMPS (WELPORT LEASE)

S-1372-99-10: TEOR OPERATION INCLUDING 132 STEAM ENHANCED WELLS, WELL VENT VAPOR RECOVERY SYSTEM AND VAPOR PIPING TO UNIT S-1372-100, SLUG CATCHER, SCRUBBERS, HEAT EXCHANGER, COMPRESSORS, PUMPS, STANDBY FLARE, SULFA CHECK SYSTEM, & VAPOR PIPING TO UNIT S-1372-26 (MCKITTRICK FEE/HOYT LEASE)

S-1372-100-39: TEOR OPERATION WITH WELL CASING COLLECTION SYSTEM WITH VAPOR PIPING TO UNIT S-1372-99 SERVING 933 STEAM ENHANCED WELLS WITH 3-PHASE SEPARATORS, STANDBY FLARE, SLUG CATCHER, SCRUBBERS, HEAT EXCHANGERS, COMPRESSORS, PUMPS, SULFA CHECK AND LIQUID SULFUR REMOVAL SYSTEMS (GAMBLE/MCKITTRICK FRONT)

S-1372-312-15: TEOR OPERATION INCLUDING 165 STEAM ENHANCED WELLS, WELL VENT VAPOR CONTROL SYSTEM, WELL COLLECTION PIPING, STANDBY FLARE, VAPOR PIPING TO S-1372-17 AND STANDBY FLARE, THREE-PHASE SEPARATORS, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, COMPRESSORS, LUBE OIL TANKS, AND PUMPS (KEENE-KELLY-SOUTH CERRITOS-WILLIAMS LEASES)

S-1372-316-21: TEOR OPERATION SERVING 285 STEAM ENHANCED WELLS, WELL COLLECTION PIPING, FLARE, WELL VENT VAPOR CONTROL SYSTEM VAPOR PIPING TO FLARE, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, SCRUBBER, COMPRESSORS, LUBE OIL TANK AND SULFA TREAT SYSTEM (HOPKINS LEASE)

S-1372-388-6: 3,000 BBL STOCK TANK VENTED TO VAPOR CONTROL SYSTEM WITH A 1.0 MMSCF/DAY JOHN ZINK AZDAIR PLA AIR-ASSISTED PRODUCED GAS FLARE SHARED BETWEEN PERMIT UNITS S-1372-388, '389, '390, '391 AND '392 INCLUDING INLET COOLER, SUCTION SCRUBBER, DISCHARGE SCRUBBER, PUMPS, AND COMPRESSORS

S-1372-408-3: 6.6 MMBTU/HR FLARE INDUSTRIES MODEL SF-VP-0616 COANDA EFFECT STANDBY FLARE WITH AUTOIGNITION SERVED BY GAS SCRUBBER; PROPANE AND/OR PUC NATURAL GAS AS PILOT FUEL (19Z LEASE)

S-1372-480-1: THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 70 STEAM ENHANCED WELLS WITH OPEN CASING VENTS SERVED BY VAPOR CONTROL SYSTEM INCLUDING COMPRESSOR(S), GAS/LIQUID SEPARATOR, AND 10.4 MMBTU/HR FLARE

S-1372-485-0: 16.5 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE WITH REDUCED WASTE GAS FLOW TO NO MORE THAN 4.9 MMBTU/HR

S-1372-519-0: 20 MMBTU/HR FLARE, 3 IN DIA X 12 FT TALL, WITH REDUCED WASTE GAS FLOW TO NO MORE THAN 4.9 MMBTU/HR, SERVING PRIMARY PRODUCTION WELL VENT VAPOR CONTROL SYSTEM, TANK BATTERY '-513 VAPOR CONTROL SYSTEM, & TEOR WELL VENT VAPOR CONTROL SYSTEM '-530 (STAR LEASE)

The following permits have already been modified to include the amendments of Rule 4311. Therefore, continued compliance is expected and no further discussion is necessary for these permits. The projects updating the permits for Rule 4311 compliance is summarized below:

Permit Unit	Project
S-1372-77, '-87, '-99, '-100, '-312, and '-316	S-1212575
S-1372-388	S-1213405
S-1372-408	S-1212075
S-1372-480	S-1224374
S-1372-485	S-1224375
S-1372-519	S-1224370

The remaining flare permits, S-1372-74, and '-76, will be evaluated in this rule discussion to ensure they are compliant with the amendments of Rule 4311. The following discussion will solely focus on the Sections in which new requirements were added in the most recent amendment to this rule, dated December 17, 2020.

Section 5.1 states that flares that are permitted to operate only during an emergency are not subject to the requirements of Sections 5.7, 5.8, 5.9, and 5.10.

The flares permitted under S-1372-74, and '-76 do not operate emergency use only. Therefore, they are not exempt from the requirements of Sections 5.7 through 5.10.

Section 5.2 states that flares that are operated 200 hours or less per calendar year as specified in the permit to operate, or with an annual throughput limit equivalent to 200 hours per year at flare rating (MMBtu/hr) as specified in the permit to operate, are exempt from the requirements of Sections 5.9 and 5.10.

Flares S-1372-74, and '-76 are not operating 200 hours or less per calendar year as specified in the permit to operate, or with an annual throughput limit equivalent to 200 hours per year at flare rating (MMBtu/hr). Therefore, they are not exempt from the requirements of Sections 5.9 and 5.10.

Sections 5.3 through 5.8 were not modified in the last amendment. Therefore, continued compliance is expected and no further discussion needed for Sections 5.3 through 5.8.

Section 5.9 states that, except for flares that meet the emissions limits in Table 3, operators of flares located at operations specified in Table 2 shall complete one of the following options:

- 5.9.1 Submit an ATC application to limit flaring annual throughput through an enforceable Permit to Operate limit, to levels not to exceed those specified in Table 2 for two consecutive years, per the compliance schedule in Section 7.2; or
- 5.9.2 Replace or modify the existing flare to meet Table 3 emissions limits per the compliance schedule in Section 7.3.

Table 2 – Flare Annual Throughput Thresholds (MMBtu/calendar year)	
Flare Category	MMBtu/yr
A. Flares used at Oil and Gas Operations, and Chemical Operations	25,000
B. Flares used at Landfill Operations	90,000
C. Flares used at Digester Operations	100,000
D. Flares used at Organic Liquid Loading Operations	25,000

Table 3 – VOC and NOx Emissions Requirements for Flares		
Flare Category	VOC (lb/MMBtu)	NOx (lb/MMBtu)
A. Flares at Oil and Gas Operations or Chemical Operations	0.008	0.018
B. Flares at Landfill Operations	0.038	0.025
C. Flares at Digester Operations (Located at a Major Source)	0.038	0.025
D. Flares at Digester Operations (Not located at a Major Source)	N/A	0.060
E. Flares at Organic Liquid Loading Operations	Pounds/1,000 gallons loaded	
	N/A	0.034

Flare S-1372-74 meets the annual throughput threshold specified in Table 2 of District Rule 4311 for flares used at oil and gas operations. The following condition will remain on the permit with the addition of referencing Rule 4311:

- *Maximum amount of gas combusted in 20 MMBtu/hr John Zink standby flare shall not exceed 22,500 MMBtu/yr. [District Rules 2201 and 4311] Y*

Flare S-1372-76 currently does not meet the requirements of Table 2 nor Table 3. However, an ATC has been submitted to modify the flare by limiting the annual throughput to 25,000 MMBtu/yr. This can be found under project S-1253812. Therefore, with the completion of this project, full compliance with Rule 4311 is expected for unit '-76 and no further discussion is necessary.

F. District Rule 4320, Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters greater than 5.0 MMBtu/hr

The purpose of this rule is to limit the emissions of oxides of nitrogen (NOx), carbon monoxide (CO), oxides of sulfur (SO₂), and particulate matter 10 microns or less (PM₁₀) from boilers, steam generators, and process heaters. This rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input greater than 5 million Btu per hour.

District Rule 4320 was amended on December 17, 2020. However, the amended rule is not SIP-approved by EPA. The previous version of this rule (amended October 16, 2008) is SIP-approved and was addressed by the District's previous TV permit renewal. The December 17, 2020 amendment to this rule consisted of the lowering of the NOx emissions limits for multiple classes and categories of units, clarifications to definitions, and updates to test methods. Based on these amendments to the SIP approved rule, the amended rule is as stringent as, if not more stringent, than the SIP approved version of the rule.

The following discussion will solely focus on updating the NOx emissions limits and source test methods which were added in the most recent rule amendment. Continued compliance is expected for the rest of the rule.

The following units are subject to Rule 4320:

- S-1372-2-30: 32.0 MMBTU/HR TEOR/NATURAL GAS-FIRED STEAM GENERATOR #5 (DIS #44826-70) WITH NORTH AMERICAN MAGNA-FLAME 4211-32-LE LOW-NOX BURNER WITH FGR AND O2 CONTROLLER (GAMBLE LEASE)
- S-1372-4-25: 25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#4) (DIS #44784-67) WITH NORTH AMERICAN MAGNA-FLAME 4211-25-LE LOW-NOX BURNER WITH FGR AND O2 CONTROLLER (GAMBLE LEASE)
- S-1372-8-32: 32 MMBTU/HR J.F. NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#10) (DIS# 44510-76) WITH NORTH AMERICAN LOW NOX BURNER, FGR, AND O2 CONTROLLER (E&M LEASE)
- S-1372-10-24: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#11) (DIS# 44511-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER (BREMER LEASE)
- S-1372-13-29: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#16) (DIS# 12667-79) EQUIPPED WITH A NORTH AMERICAN G-LE ULTRA LOW-NOX BURNER, FGR AND O2 CONTROLLER
- S-1372-14-27: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#13 BREMER, DIS# 44521-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, O2 CONTROLLER AND FGR
- S-1372-16-27: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#12) (DIS# 44519-76) EQUIPPED WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER, FGR AND O2

CONTROLLER AND EXHAUST GAS CONNECTED TO SCRUBBER/ESP
LISTED ON S-1372-127 (MCKITTRICK FRONT LEASE)

- S-1372-17-33: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#19) (DIS# 45002-80) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR
- S-1372-18-27: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (#28 DIS# 45003-80) EQUIPPED WITH FLUE GAS RECIRCULATION (FGR)
- S-1372-19-29: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#29) (DIS# 45004-80) EQUIPPED WITH A NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR
- S-1372-20-27: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#30) (DIS# 45005-80) EQUIPPED WITH A NORTH AMERICAN, MODEL MAGNA-FLAME G-LE, LOW NOX BURNER, FGR AND O2 CONTROLLER
- S-1372-24-31: 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#20 DIS# 45220-81) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER
- S-1372-29-32: 30.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR #23 (DIS #45223-80) WITH NORTH AMERICAN MAGNA-FLAME G-LE LOW NOX BURNER, FGR, AND O2 CONTROLLER
- S-1372-30-27: 62.5 MMBTU/HR NATURAL/CASING GAS-FIRED STEAM GENERATOR (#33) (DIS# 45233-82) WITH O2 CONTROLLER, LOW-NOX BURNER AND FGR
- S-1372-31-27: 62.5 MMBTU/HR NATURAL GAS/CASING GAS/TANK VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#34) (DIS# 45234-82) EQUIPPED WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER
- S-1372-32-26: 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#35) (DIS# 45235-82) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER
- S-1372-33-27: 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#36) (DIS# 45236-82) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

- S-1372-34-27: 62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#37) (DIS# 45237-82) WITH O2 CONTROLLER, LOW NOX BURNER, AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS
- S-1372-111-16: 62.5 MMBTU/HR NATURAL/WASTE GAS-FIRED STEAM GENERATOR (#46) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FGR
- S-1372-112-17: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#45 GAMBLE) WITH NORTH AMERICAN 4231-GLE ULTRA-LOW NOX BURNER, O2 CONTROLLER, AND FGR
- S-1372-113-15: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#44) WITH NORTH AMERICAN GLE LOW NOX BURNER, O2 CONTROLLER AND FGR
- S-1372-127-28: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR #43 EQUIPPED WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE LOW NOX BURNER, FGR, O2 CONTROLLER, AND EXHAUST GAS SOX SCRUBBER/ESP SHARED WITH S-1372-317 (MCKITTRICK FRONT LEASE)
- S-1372-139-12: 10.0 MMBTU/HR NATURAL GAS/LPG FIRED HEATER TREATER #1 (#25118) WITH TWO 5 MMBTU/HR KVAERNER-ZINK LOW NOX FORCED DRAFT BURNERS AND FLUE GAS RECIRCULATION, FUEL INDUCED FLUE GAS RECIRCULATION, TWO STACKS AND PLC AUTOMATED CONTROLS
- S-1372-146-9: 8 MMBTU/HR NATURAL GAS FIRED HEATER TREATER OPERATING AS AN UNFIRED FREE WATER KNOCKOUT (#2) (#10290)
- S-1372-187-16: 3.0 MW COGEN FACILITY INCLUDING SOLAR CENTAUR MODEL T4701 GAS FIRED TURBINE ENGINE GENERATOR SET WITH INLET AIR EVAPORATIVE COOLER, GAS FIRED 31 MMBTU/HR MAXFIRE MODEL 110 SERIES DUCT BURNER, HEAT RECOVERY STEAM GENERATOR, SCR, AND KOCH COALESCER
- S-1372-188-15: 3.0 MW COGEN FACILITY INCLUDING SOLAR CENTAUR MODEL T4701 GAS FIRED TURBINE ENGINE GENERATOR SET WITH INLET AIR EVAPORATIVE COOLER, GAS FIRED 31 MMBTU/HR MAXFIRE MODEL 110 SERIES DUCT BURNER, HEAT RECOVERY STEAM GENERATOR, SCR, AND KOCH COALESCER

- S-1372-194-17: 5.0 MW COGEN FACILITY INCLUDING SOLAR TAURUS MODEL 60-T73005 GAS FIRED TURBINE ENGINE GENERATOR SET WITH SOLONOX COMBUSTORS, GAS FIRED MAXFIRE MODEL 110 SERIES DUCT BURNER, SCR, AND HEAT RECOVERY STEAM GENERATOR
- S-1372-317-18: 67.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR EQUIPPED WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE LOW NOX BURNER, FGR AND EXHAUST GAS SOX SCRUBBER W/ESP SHARED WITH S-1372-127 (MCKITTRICK FRONT LEASE)
- S-1372-318-11: 67.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR (HOPKINS LEASE)
- S-1372-319-21: 67.5 MMBTU/HR NATURAL GAS/TEOR/TVR GAS-FIRED STEAM GENERATOR (#49) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR. OPERATING AT TWO LOCATIONS: MCKITTRICK FRONT (NW6, T30S R21E) AND HOPKINS LEASE (NW10, T29S R21E)
- S-1372-329-9: 62 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION
- S-1372-334-23: 27.5 MMBTU/HR NATURAL GAS/WASTE GAS-FIRED STEAM GENERATOR (#56) (HSG #577) WITH FGR AND NORTH AMERICAN MAGNA-FLAME 4211 27-LE LOW-NOX BURNER OPERATED AT VARIOUS SPECIFIED LOCATIONS
- S-1372-355-12: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#52) (DIS #22457-79) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR (STAR FEE LEASE)
- S-1372-356-12: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22468-79) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER
- S-1372-357-12: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22469-79) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION
- S-1372-358-13: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22470-79) WITH FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

- S-1372-359-10: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22632-80) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION
- S-1372-371-8: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH A NORTH AMERICAN MAGNA FLAME G-LE ULTRA LOW NOX BURNER, OXYGEN (O2) CONTROLLER AND FLUE GAS RECIRCULATION, OPERATED AT VARIOUS SPECIFIED LOCATIONS
- S-1372-372-10: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVR GAS-FIRED (TVR SYSTEM GAS ALLOWED AT REARDON LEASE ONLY) STEAM GENERATOR (#64) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, OXYGEN (O2) CONTROLLER AND FGR
- S-1372-373-10: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#65) (DIS# 28623-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FGR
- S-1372-374-8: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#57) (DIS# 21939-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER
- S-1372-375-6: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#58) (DIS# 28623-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER
- S-1372-376-10: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#59) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER
- S-1372-377-8: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#60) (DIS# 28618-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER
- S-1372-378-6: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#34) (DIS #19965-74) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS
- S-1372-379-6: 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#37) (DIS #20623-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

- S-1372-394-4: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SG #67) WITH NORTH AMERICAN GLE MODEL G ULTRA LOW NOX BURNER, FGR, AND O2 CONTROLLER
- S-1372-395-3: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE MODEL G ULTRA LOW NOX BURNER, FGR, AND O2 CONTROLLER
- S-1372-411-4: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME G-LE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR #68)
- S-1372-413-1: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE BURNER AND A FLUE GAS RECIRCULATION SYSTEM
- S-1372-414-3: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE BURNER AND A FLUE GAS RECIRCULATION SYSTEM
- S-1372-417-2: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#71), WITH NORTH AMERICAN GLE ULTRA LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM (DOME)
- S-1372-418-2: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN GLE ULTRA LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM (HOPKINS)
- S-1372-422-1: 85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-433) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)
- S-1372-423-1: 85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-434) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)
- S-1372-424-1: 85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-442) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)
- S-1372-425-0: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH A NORTH AMERICAN GLE BURNER, OR EQUIVALENT, AND FLUE GAS RECIRCULATION

- S-1372-429-0: 18 MMBTU/HR LPG OR NATURAL GAS-FIRED STEAM GENERATOR
- S-1372-436-1: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#81) WITH A NORTH AMERICAN G-LE STANDARD BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
- S-1372-437-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#76) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
- S-1372-438-1: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#77) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
- S-1372-439-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#78) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
- S-1372-440-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#79) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
- S-1372-463-0: 25.2 MMBTU/HR NATIONAL CO S/N S8736 NATURAL GAS/PROPANE/PRODUCTION GAS-FIRED STEAM GENERATOR WITH BURNER DIFFUSER PLATE AND FLUE GAS RECIRCULATION (FGR)
- S-1372-469-0: 62.5 MMBTU/HR C.E. NATCO GAS/CASING GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE LOW-NOX BURNER AND FLUE GAS RECIRCULATION (HOPCO, H-2, DIS# 39454-87)
- S-1372-479-0: 19.0 MMBTU/HR NATURAL GAS/PROPANE-FIRED STEAM GENERATOR WITH GIDEON MODEL MGW-25R1 ULTRA LOW NOX BURNER
- S-1372-483-0: 10 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH TWO SEPARATE 5.0 MMBTU/HR LOW NOX BURNERS CONNECTED TO VAPOR CONTROL SYSTEM S-1372-480
- S-1372-486-0: 20 MMBTU/HR TEOR GAS AND NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE MODEL 4211-21/X1288 LOW NOX BURNER

- S-1372-488-0: 20.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH ACT GIDEON MGW-25 LOW NOX BURNER AND INDUCED FLUE GAS RECIRCULATION OPERATED AT VARIOUS SPECIFIED LOCATIONS WITHIN THE STATIONARY SOURCE
- S-1372-489-0: 1,500 BBL WELDED FIXED ROOF WASH TANK WITH VAPOR RECOVERY SYSTEM VENTED TO THE CASING GAS GATHERING SYSTEM AND APPROVED INCINERATION DEVICES STEAM GENERATORS S-1372-486, '-488, '-541 AND/OR FLARE S-1372-485 AND SERVING TANKS S-1372-490 THROUGH '-498
- S-1372-499-0: 85 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM
- S-1372-500-0: 10 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO 5.0 ULTRA LOW-NOX MMBTU/HR BURNERS
- S-1372-503-0: 10 MMBTU/HR GAS-FIRED C.E. NATCO M&M HEATER TREATER #3 WITH TWO 5.0 ULTRA LOW-NOX MMBTU/HR BURNERS
- S-1372-504-2: 62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STRUTHERS STEAM GENERATOR WITH LOW NOX BURNER AND O2 CONTROLLER SERVED BY AIRPOL DUAL VALVE TRAY SOX SCRUBBER WITH CHEVRON TYPE MIST ELIMINATOR AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH S-1372-504 AND '-520
- S-1372-505-0: 12.6 MMBTU/HR NATURAL GAS-FIRED TRICO SUPERIOR MODEL X-4398 HEATER TREATER V-3 WITH TWO 6.3 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS
- S-1372-506-0: 85 MMBTU/HR STRUTHERS NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN LOW NOX BURNER AND FGR AUTHORIZED TO BE OPERATED AT VARIOUS SPECIFIED LOCATIONS
- S-1372-507-0: 10 MMBTU/HR NATURAL GAS-FIRED H.T.I. M&M HEATER TREATER #3 WITH TWO MAXON MODEL XPO EB ULTRA LOW NOX BURNERS OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-1372
- S-1372-508-0: 10 MMBTU/HR NATURAL GAS-FIRED H.T.I. HEATER TREATER #4, SA# 0392 WITH DORMANT BURNERS, FUNCTIONING AS AN EXEMPT FWKO PRESSURE VESSEL WHILE THE BURNERS ARE DORMANT

- S-1372-509-0: 87.7 MMBTU/HR STRUTHERS NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE BURNER, MULTIPLE LOCATIONS - M & M GENERATOR #5
- S-1372-520-0: 62.5 MMBTU/HR NATURAL/TEOR GAS FIRED STEAM GENERATOR (CUSA ID # 50-1-15A, DIS# 43005-78) WITH FLUE GAS RECIRCULATION, O2 CONTROLLER AND SO2 SCRUBBER AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH UNIT S-1372-504
- S-1372-521-0: 5,000 BBL FIXED ROOF FREE WATER KNOCKOUT TANK T-1 W/VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER, LIQUID KNOCKOUT VESSELS, & VAPOR COMPRESSOR WITH PIPING TO STEAM GENERATOR S-1372-520, HEATER TREATERS S-1372-525 AND '-526, AND SERVING TANKS S-1372-521, '-522, '-523, '-524, '-527, '-528, '-529, '-533, '-534, AND '-535, AND WEMCO S-1372-549 (MIDWAY SUNSET FIELD 15A TANK BATTERY)
- S-1372-525-0: 12.3 MMBTU/HR NATURAL GAS-FIRED NATCO MODEL VFH-RM, SERIAL NO. ELIN22901-01 HEATER TREATER V-1 WITH TWO 6.15 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS WITH VAPOR RECOVERY PIPING TO S-1372-521
- S-1372-526-0: 12.3 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER V-2 WITH TWO 6.15 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS WITH VAPOR RECOVERY PIPING TO S-1372-521
- S-1372-536-0: 77.6 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER
- S-1372-539-0: 85 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A NORTH AMERICAN LOW-NOX LEL BURNER AUTHORIZED TO BE OPERATED AT VARIOUS SPECIFIED LOCATIONS
- S-1372-541-0: 85 MMBTU/HR PCL NATURAL GAS AND WASTE GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION AUTHORIZED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS
- S-1372-543-0: 85 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

S-1372-545-0: 85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

Please note, while permits S-1372-142, '-143, '-144 and '-412 are for heater treaters, the burners they are served by are permit exempt and therefore, the permits are not subject to Rule 4320.

Section 5.1 requires that an operator of a unit subject to this rule shall comply with all applicable requirements of the rule and one of the following, on a unit-by-unit basis:

- 5.1.1: Operate the unit to comply with the emission limits specified in Sections 5.2 and 5.4; or
- 5.1.2: Pay an annual emissions fee to the District as specified in Section 5.3 and comply with the control requirements specified in Section 5.4; or
- 5.1.3: Comply with the applicable Low-use Unit requirements of Section 5.5.

Section 5.2 - NO_x and CO Emissions Limits

Section 5.2 requires that units subject to this section shall not be operated in a manner which exceeds the applicable NO_x emissions limit specified in Table 1 - Tier 1 NO_x Emissions Limits (until December 31, 2023) and Table 2 - Tier 2 NO_x Emissions Limits (on and after December 31, 2023). Section 5.2 also requires that units subject to this section shall not be operated in a manner to which exceeds a carbon monoxide (CO) emissions limit of 400 ppmv. All ppmv emission limits specified in Section 5.2 are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen (O₂). Emission concentrations shall be corrected to 3.00 percent oxygen in accordance with Section 8.1.

Rule 4320, Table 1: Tier 1 NO_x Emission Limits			
Category	NO_x Limit	Authority to Construct	Compliance Deadline
C. Oilfield Steam Generators			
1. Units with a total rated heat input > 5.0 MMBtu/hr to ≤ 20.0 MMBtu/hr	a) Standard Schedule 9 ppmv or 0.011 lb/MMBtu; or	July 1, 2011	July 1, 2012
	b) Enhanced Schedule 6 ppmv or 0.007 lb/MMBtu	January 1, 2013	January 1, 2014

Rule 4320, Table 1: Tier 1 NO _x Emission Limits			
Category	NO _x Limit	Authority to Construct	Compliance Deadline
2. Units with a total rated heat input >20.0 MMBtu/hr	a) Standard Schedule 7 ppmv or 0.008 lb/MMBtu; or	July 1, 2009	July 1, 2010
	b) Staged Enhanced Schedule Initial Limit 9 ppmv or 0.011 lb/MMBtu; and	July 1, 2011	July 1, 2012
	Final Limit 5 ppmv or 0.0062 lb/MMBtu	January 1, 2013	January 1, 2014
3. Units firing on less than 50%, by volume, PUC quality gas.	Staged Enhanced Schedule Initial Limit 12 ppmv or 0.0145 lb/MMBtu; and	July 1, 2010	July 1, 2011
	Final Limit 9 ppmv or 0.011 lb/MMBtu	January 1, 2013	January 1, 2014

Rule 4320, Table 2: Tier 2 NO _x Emission Limits				
Category	NO _x Limit	Emission Control Plan	Authority to Construct	Compliance Deadline
C. Oilfield Steam Generators				
1. Units with a total rated heat input > 5.0 MMBtu/hr and ≤ 20.0 MMBtu/hr	6 ppmv or 0.0073 lb/MMBtu	May 1, 2022	May 1, 2022	December 31, 2023
2. Units with a total rated heat input > 20.0 MMBtu/hr and ≤ 75.0 MMBtu/hr	5 ppmv or 0.0061 lb/MMBtu	May 1, 2022	May 1, 2022	December 31, 2023
3. Units with a total rated heat input > 75.0 MMBtu/hr	5 ppmv or 0.0061 lb/MMBtu	May 1, 2022	May 1, 2022	December 31, 2023
4. Units firing on less than 50%, by volume, PUC quality gas	5 ppmv or 0.0061 lb/MMBtu	May 1, 2022	May 1, 2022	December 31, 2023

Section 5.3 - Annual Fee Calculation

5.3.1 On and after January 1, 2010, an operator with units that will comply with the requirements of Section 5.1.2 in lieu of complying with Section 5.2 Table 1 shall pay a total annual fee to the District based on the total NO_x emissions from those units.

5.3.2 Beginning January 1, 2025, an operator with units that will comply with the requirements of Section 5.1.2 in lieu of complying with Section 5.2 Table 2 shall pay a total annual emission fee to the District based on total NO_x emissions from those units. Units paying an emissions fee under this section are not subject to Section 5.3.1.

Section 5.4 - Particulate Matter Control Requirements

Section 5.4.1 of this rule requires the operator of a unit to comply with one of the following requirements for control of particulate matter (PM):

- 1) Operators shall fire units exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases;
- 2) Operators shall limit fuel sulfur content to no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or
- 3) operators shall install and properly operate an emission control system that reduces SO₂ emissions by at least 95% by weight; or limit exhaust SO₂ to less than or equal to 9 ppmv corrected to 3.0% O₂

The following table summarizes how each unit is complying with Section 5.1:

Permit Unit	Complies with Section 5.1 by meeting:
S-1372-417, '-425, '-436, '-437 through '-440, '-499, '-543 and '-545	Section 5.1.1
S-1372-2, '-4, '-8, '-10, '-13, '-14, '-16, '-17, '-18, '-19, '-20, '-24, '-26, '-29, '-30, '-31, '-32, '-33, '-34, '-111, '-112, '-113, '-127, '-317, '-318, '-319, '-329, '-334, '-355, '-356, '-357, '-358, '-359, '-371, '-372, '-373, '-374, '-375, '-376, '-377, '-378, '-379, '-394, '-395, '-411, '-413, '-414, '-418, '-422, '-423, '-424, '-483, '-486, '-488, '-479, '-500, '-503, '-505 through '-507, '-509, '-520, '-525, '-526, and -539	Section 5.1.2

The following units do not meet the emission limits nor have elected to pay the emissions fee: S-1372-139, '-146, '-429, '-463, '-469, and '-508. However, they have been designated as non-compliant dormant emissions unit (DEU) and therefore, are required to modify the unit for Rule 4320 compliance before they can operate.

Unit S-1372-504 and '-536 are currently designated as a compliant DEU. However, upon review, it was discovered that they do not meet the requirements of Section 5.1. Therefore, the following condition will be added to each of their permits, to designate them as non-compliant dormant emissions units:

- *Operation of the unit is not authorized until modifications are made to comply with all applicable District Rules as authorized by an Authority to Construct. [District Rule 2010]*

Unit S-1372-541 currently has a NO_x limit of 7 ppmv but is subject to a NO_x limit of 5 ppmv. As discussed earlier in this evaluation, there is a finalized ATC project that will be incorporated into this Title V renewal, S-1221522. This project lowers the unit's NO_x limit to 5 ppmv and therefore, compliance is expected.

Section 6.2.1 states that fuel hhv shall be certified by third party fuel supplier or determined by:

6.2.1.1 American Society for Testing and Materials (ASTM) D 240 or D 4809 for liquid hydrocarbon fuels;

6.2.1.2 ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels.

Conditions enforcing section 6.2.1 shall be updated with the latest source test methods as follows:

- *If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4306 and 4320]*

Continued compliance is expected for the rest of District Rule 4320.

G. District Rule 4401, Steam-Enhanced Crude Oil Production Wells

The purpose of this rule is to limit the Volatile Organic Compound (VOC) emissions from steam-enhanced crude oil production wells. This rule is applicable to all steam-enhanced crude oil production wells and any associated VOC collection and control systems.

The June 16, 2011 version of District Rule 4401 was approved into the SIP on November 16, 2011. The rule was amended on June 15, 2023 and ARB sent the amendments to EPA for inclusion in the SIP on October 16, 2023. The June 15, 2023 amendments to Rule 4401 were intended to address California Best Available Retrofit Control Technology (BARCT) requirements pursuant to California Assembly Bill 617 by increasing the stringency of the leak detection and repair (LDAR) requirements in the rule and address deficiencies that EPA identified in the rule when compared to EPA's 2016 Control Techniques Guidelines for the Oil and Natural Gas Industry (Oil and Gas CTG).¹ The amendments to Rule 4401 added definitions for Optical Gas Imaging (OGI) and Rig-up Operation, and replaced the definition

¹ EPA. (2016) *Control Techniques Guidelines for the Oil and Natural Gas Industry*.
<https://www.epa.gov/sites/default/files/2016-10/documents/2016-ctg-oil-and-gas.pdf>

of Pressure Relief Valve (PRV) with Pressure Relief Device (PRD) to improve clarity; reduced the minor leak threshold for components other than PRDs from 2,000 ppmv to 500 ppmv; removed the partial exemption from rule requirements for one-half inch nominal or less stainless steel tube fittings that have been demonstrated to be leak-free based on an initial inspection; removed the rule exemption for components exclusively handling gas/vapor or liquid with a VOC content of 10% by weight or less; reduced the number of allowable leaks for one to five steam-enhanced crude oil production wells connected to a VOC collection and control system from three to zero; increased the required inspection frequency for components other than pipes and unsafe-to-monitor components from at least once every year to at least once every quarter; reduced the period in which gas leaks greater than 50,000 ppmv and major liquid leaks must be repaired from two days to one day; and added a requirement that leaks detected with the use of an OGI instrument must be measured using EPA Reference Method 21 to within two calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component. These amendments increase the stringency of District Rule 4401 compared to the June 16, 2011 version of the rule.

Sentinel Peaks operates 18 oil production well operation sites, permit units S-1372-76, '-77, '-87, '-99, '-100, '-308, '-312, '-316, '-387, '-404, '-426, '-464, '-480, '-487, '-517, '-530, '-548, that are potentially subject to District Rule 4401.

When requested information regarding unit '-308, the applicant stated that they would like to cancel this permit. Therefore, permit S-1372-308 has been cancelled and no further discussion is necessary.

The updated requirements of District Rule 4401 that apply to the steam oil production well sites are discussed below.

Section 3.0 - Definitions

- 3.20 Leak: The dripping of VOC-containing liquid or the detection of a concentration of total organic compound, above background, determined according to the test method specified in Section 6.3.3 that exceeds any of the values specified in Table 1 or Table 2, Section 3.20.1 and Section 3.20.2 of this rule. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere.

Rule 4401, Table 1 – Gas Leak in ppmv as Methane until June 30, 2024		
Type of Component	Type of Component	Type of Component
1. PRDs	Greater than 10,000	400 to 10,000

2. Components other than PRDs	Greater than 10,000	2,000 to 10,000

Rule 4401, Table 2 – Gas Leak in ppmv as Methane after June 30, 2024		
Type of Component	Major Gas Leak	Minor Gas Leak
1. PRDs	Greater than 10,000 to 50,000	400 to 10,000
2. Components other than PRDs	Greater than 10,000 to 50,000	500 to 10,000

3.20.1 Major Liquid Leak: a visible mist or a continuous flow of liquid that is not seal lubricant.

3.20.2 Minor Liquid Leak: a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute.

The draft permits for the wells subject to District Rule 4401 shall be updated with the following condition:

- *A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs. [District Rule 4401]*
- *A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. [District Rule 4401]*

Section 4.0 - Exemptions

4.1 Any steam-enhanced crude oil production well undergoing service or repair during the time the well is not producing.

The draft permit requirements for the wells subject to District Rule 4401 include the following exemption for steam-enhanced crude oil production wells undergoing service or repair during the time the wells are not producing.

- *During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401]*

4.4 The requirements of this rule shall not apply to up to five (5) cyclic wells owned by a

company that is not a small producer, in each stationary source as defined in Rule 2201 (New and Modified Stationary Source Review Rule), and up to 20 cyclic wells owned by a small producer, provided the requirements of Section 4.4.1 and Section 4. 4.2 are met.

4.4.1 the well is located more than 1000 feet from an existing well vent vapor control system operated by the company, and

2.4.2 the operation is under District permit.

This facility does not have any uncontrolled wells and therefore, this exemption is not applicable.

4.5 The requirements of this rule shall not apply to components serving the produced fluid line.

The draft permit requirements for the wells subject to District Rule 4401 include the following exemption for components serving the produced fluid line from this rule:

- *The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401]*

Section 5.0 - Requirements

5.1 An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with the requirements of either Section 5.1.1 or Section 5.1.2.

5.1.1 The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere.

5.1.2 The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0.

The draft permit requirements for the wells subject to District Rule 4401 shall be updated to the following condition that requires compliance with Section 5.1:

- *An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil*

and water) is connected to a VOC collection and control system as defined in District Rule 4401 (6/15/2023). The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401]

Section 5.2 - Determination of Compliance with the Leak Standards

An operator shall comply with the following:

- 5.2.1 An operator shall be in violation of this rule if any District inspection demonstrates that one or more of the conditions in Section 5.2.2 exist at the facility or if any operator inspection conducted pursuant to Section 5.4 demonstrates that one or more of the conditions in Section 5.2.2 exist at the facility.

5.2.2 Leak Standards

The following conditions shall be used for determination of violation during an inspection pursuant to the provisions of Section 5.2.1.

- 5.2.2.1 Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere.
- 5.2.2.2 Existence of a component with a major liquid leak as defined in Section 3.0.
- 5.2.2.3 Existence of a component with a gas leak greater than 50,000 ppmv.
- 5.2.2.4 Existence of a component leak described in Section 5.2.2.4.1 through Section 5.2.2.4.3 in excess of the allowable number of leaks specified in Table 3 or Table 4.
 - 5.2.2.4.1 A minor liquid leak, or
 - 5.2.2.4.2 A minor gas leak, or
 - 5.2.2.4.3 A gas leak greater than 10,000 ppmv up to 50,000 ppmv.

Rule 4401, Table 3 – Number of Allowable Leaks until June 30, 2024	
Number of Steam-Enhanced Crude Oil Production Wells Connected to a VOC Collection and Control System	Number of Allowable Leaks
1 to 25	3
26 to 50	6
51 to 100	8
101 to 250	10
251 to 500	15
More than 500	One (1) for each 20 wells tested with a minimum of 50 wells tested.

*Leaks counted toward the allowable leaks in Table 3 are still subject to component repair requirements of section 5.5.

Rule 4401, Table 4 – Number of Allowable Leaks after June 30, 2024	
Number of Steam-Enhanced Crude Oil Production Wells Connected to a VOC Collection and Control System	Number of Allowable Leaks
1 to 5	0
6 to 25	3
26 to 50	6
51 to 100	8
101 to 250	10
251 to 500	15
More than 500	One (1) for each 20 wells tested with a minimum of 50 wells tested.

*Leaks counted toward the allowable leaks in Table 4 are still subject to component repair requirements of section 5.5.

The draft permit requirements for the wells subject to District Rule 4401 shall be updated to the following condition that requires compliance with Section 5.2:

- *An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401 (6/15/2023); 3) Existence of a component with a gas leak greater than 50,000 ppmv;*

4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401]

5.3 An operator shall comply with the following operating requirements:

- 5.3.1 An operator shall not use any component with a leak as defined in Section 3.0, or that is found to be in violation of the provisions of Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of this rule.
- 5.3.2 Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere.
- 5.3.3 An operator shall comply with the requirements of Section 6.7 if there is any change in the description of major components or critical components.

The draft permit requirements for the wells subject to District Rule 4401 include the following conditions that require compliance with Section 5.3:

- *The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401]*
- *Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal*

spillage of material and VOC emissions to the atmosphere. [District Rule 4401]

- *An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401]*

Section 5.4 - Inspection and Re-inspection Requirements

Unless otherwise specified, an operator shall perform all component inspections and gas leak measurements pursuant to the requirements of Section 6.3.3.

- 5.4.1 Until June 30, 2024, except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 at least once every year.
- 5.4.2 After June 30, 2024, except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 at least once every calendar quarter.
- 5.4.3 An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 5 of this rule.
- 5.4.4 In addition to the inspections required by Section 5.4.1, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows:
 - 5.4.4.1 An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week.
 - 5.4.4.2 Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 5 of this rule.
- 5.4.5 In addition to the inspections required by Section 5.4.1, Section 5.4.3 and Section 5.4.4, an operator shall perform the following inspections:
 - 5.4.5.1 An operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. An

operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection.

5.4.5.2 An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service.

5.4.5.3 Except for PRDs subject to the requirements of Section 5.4.5.1, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced.

5.4.6 An operator shall inspect all unsafe-to-monitor components during each turnaround.

5.4.7 A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator.

The draft permit requirements for the wells subject to District Rule 4401 shall be updated or include the following conditions that require the operator to perform the inspections specified in Section 5.4:

- *Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401]*
- *The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401]*
- *The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a*

leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401]

- The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401]*
- The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401]*
- Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401]*
- The operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401]*

Section 5.5 - Leak Repair Requirements

5.5.1 An operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. An operator shall include the following information on the tag:

5.5.1.1 The date and time of leak detection.

5.5.1.2 The date and time of leak measurement.

5.5.1.3 For a gaseous leak, the leak concentration in ppmv.

5.5.1.4 For a liquid leak, whether it is a major liquid leak or a minor liquid leak.

5.5.1.5 Whether the component is an essential component, an unsafe-to-monitor component, or a critical component.

5.5.2 An operator shall keep the tag affixed to the component until an operator has met all of the following conditions:

5.5.2.1 Repaired or replaced the leaking component, and

5.5.2.2 Re-inspected the component using the test method in Section 6.3.3, and

5.5.2.3 The component is found to be in compliance with the requirements of this rule.

5.5.3 An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak.

5.5.4 Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0, an operator shall comply with at least one of the requirements of Section 5.5.4.1, Section 5.5.4.2, or Section 5.5.4.3 as soon as practicable but not later than the time period specified in Table 5 or Table 6.

5.5.4.1 Repair or replace the leaking component; or

5.5.4.2 Vent the leaking component to a VOC collection and control system as defined in Section 3.0, or

5.5.4.3 Remove the leaking component from operation.

Rule 4401, Table 5 – Repair Period until June 30, 2024	
Type of Leak	Repair Period in Calendar Days
Gas Leaks	
Minor Gas Leak	14
Major Gas Leak less than or equal to 50,000 ppmv	5
Gas Leak greater than 50,000 ppmv	2
Liquid Leaks	
Minor Liquid Leak	3
Major Liquid Leak	2

Rule 4401, Table 6 – Repair Period after June 30, 2024	
Type of Leak	Repair Period in Calendar Days
Gas Leaks	
Minor Gas Leak	14
Major Gas Leak less than or equal to 50,000 ppmv	5
Gas Leak greater than 50,000 ppmv	1
Liquid Leaks	
Minor Liquid Leak	3
Major Liquid Leak	1

5.5.5 The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 5.

- 5.5.6 The time of the initial leak detection shall be the start of the repair period specified in Table 5 or Table 6.
- 5.5.7 If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier.
- 5.5.8 After June 30, 2024, if a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions:
- 5.5.8.1 The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following:
- 5.5.8.1.1 The Permit to Operate (PTO) number and physical location of the well being repaired.
- 5.5.8.1.2 The date and time the component was found to be leaking and the leak concentration.
- 5.5.8.1.3 Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled.
- 5.5.8.2 The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in Section 6.3.3.
- 5.5.8.3 Operators who fail to comply with all of the requirements specified in Sections 5.5.8.1 and 5.5.8.2 shall be in violation with the provisions of this rule.

The draft permit requirements for the wells subject to District Rule 4401 shall continue to include the following conditions that require the operator to perform the tag and repair leaks or replace components as specified in Section 5.5:

- *The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401]*

- *The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401]*
- *The operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401]*
- *Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401 (6/15/2023), or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401]*
- *The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401]*
- *The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401]*
- *If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401]*
- *If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall*

include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401]

6.0 - Administrative Requirements

Section 6.1 - Recordkeeping and Submissions

An operator shall maintain the records required by Section 6.1 and Section 6.2 for a period of five (5) years. These records shall be made available to the APCO, California Air Resources Board (ARB), and EPA upon request.

- 6.1.1 The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs.
- 6.1.2 A small producer shall maintain monthly records of county-specific crude oil production. For the purpose of this rule, the monthly crude oil production records required by the California Geologic Energy Management Division (CalGEM) may be used to satisfy Section 6.1.2.
- 6.1.3 An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0.
- 6.1.4 The inspection log maintained pursuant to Section 6.4.
- 6.1.5 Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration.
- 6.1.6 An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5.
- 6.1.7 An operator shall keep a copy of the APCO-approved Operator Management Plan at the facility.

- 6.1.8 An operator shall keep a list of all gauge tanks, as defined in Section 3.0. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment.
- 6.1.9 The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing.
- 6.1.10 An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year.

The draft permit requirements for the wells subject to District Rule 4401 shall continue to include the following conditions that require the operator maintain records as specified in Section 6.1:

- *The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401]*
- *Unless source testing is not required, the operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401]*
- *Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. [District Rule 4401]*
- *The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401]*
- *The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401]*
- *The operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production*

equipment [District Rule 4401]

- The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (6/15/20). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401]*
- If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401]*
- All records shall be maintained and retained for a minimum of five (5) years. Records shall be made available to the APCO, California Air Resources Board (ARB), and EPA upon request. [District Rules 1070, 2201, and 4401]*

Section 6.2 - Compliance Source Testing

- 6.2.1 An operator shall source test each calendar year all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements.
- 6.2.2 If approved by the APCO, a VOC collection and control system is not subject to Section 6.2.1 if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the requirements in Sections 6.2.2.1 through 6.2.2.3.
- 6.2.2.1 An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines – Phase 2); or
- 6.2.2.2 A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters – 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters – 0.075 MMBtu/hr to 2.0 MMBtu/hr); or

6.2.2.3 A unit subject to District Rule 4311 (Flares).

6.2.3 An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0:

6.2.3.1 An operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July – September), and whenever there is a change in the source or type of produced fluid in the gauge tank.

6.2.3.2 The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9.

The draft permit requirements for the wells subject to District Rule 4401 shall continue to include the following conditions that require compliance with Section 6.2:

- *The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401]*
- *If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401]*
- *The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401 (6/15/2023). The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the*

actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401]

Section 6.3 - Test Methods

Test methods that are equivalent to those test methods specified in Section 6.3.1 through Section 6.3.5 may be used provided that such equivalent test methods have been previously approved, in writing, by the EPA, ARB, and the APCO.

- 6.3.1 The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported.
- 6.3.2 VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432.
- 6.3.3 Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface.
 - 6.3.3.1 After June 30, 2024, all leaks detected with the use of an OGI instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in Table 6.
- 6.3.4 The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids.

The draft permit requirements for the wells subject to District Rule 4401 shall continue to include the following conditions that require the use of the source test methods specified in Section 6.3:

- *The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401]*
- *VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401]*
- *Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401]*
- *All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401]*
- *The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401]*

Section 6.4 - Inspection Log

An operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed:

- 6.4.1 The total number of components inspected, and the total number and percentage of leaking components found by component type.
- 6.4.2 The location, type, and name or description of each leaking component and description of any unit where the leaking component is found.
- 6.4.3 The date of leak detection and the method of leak detection.
- 6.4.4 For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak.
- 6.4.5 The date of repair, replacement, or removal from operation of leaking components.
- 6.4.6 The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier.
- 6.4.7 The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier.
- 6.4.8 The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced.
- 6.4.9 The inspector's name, business mailing address, and business telephone number.
- 6.4.10 The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log.

The draft permit requirements for the wells subject to District Rule 4401 shall continue to include the following condition that requires the operator to maintain an inspection log with all of the information specified in Section 6.4:

- *The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record*

whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401]

Section 6.5 - Employee Training Program

An operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary.

The draft permit requirements for the wells subject to District Rule 4401 shall continue to include the following condition that requires the operator to comply with Section 6.5.

- *The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401]*

Section 6.6 - Operator Management Plan

An operator whose existing wells are subject to this rule or whose existing wells are exempt pursuant to Section 4.0 of this rule shall prepare and submit an Operator Management Plan for approval by the APCO. An operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required by Section 6.6.4 through Section 6.6.7 below. The Operator Management Plan shall include, at a minimum, all of the following information:

- 6.6.1 A description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt pursuant to Section 4.0 of this rule.
- 6.6.2 Identification and description of any known hazard that might affect the safety of an inspector.
- 6.6.3 Except for pipes, the number of components that are subject to this rule by component type.

- 6.6.4 Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation.
- 6.6.5 Except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description).
- 6.6.6 Except for pipes, components exempt pursuant to Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Section 4.6 shall be submitted with the Operator Management Plan.
- 6.6.7 A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team.
- 6.6.8 A description of the training standards for personnel that inspect and repair components.
- 6.6.9 A description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary.

The draft permit requirements for the wells subject to District Rule 4401 shall continue to include the following condition that requires the operator to prepare and submit an Operator Management Plan as specified in Section 6.7:

- *The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401 (6/15/2023), Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by*

process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401]

6.7 By January 30 of each year, an operator shall submit to the APCO for approval, in writing, an annual report indicating any or no changes to an existing Operator Management Plan.

The draft permit requirements for the wells subject to District Rule 4401 shall continue to include the following condition that requires the operator to comply with Section 6.7:

- *By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any or no changes to an existing Operator Management Plan. [District Rule 4401]*

The following conditions of the proposed requirements for the renewed Title V permit ensure compliance with this rule.

Permit Unit #	Condition #s
S-1372-76	32 through 76 and 82
S-1372-77	37 through 81 and 90
S-1372-87	32 through 76 and 82
S-1372-99	27 through 71 and 76
S-1372-100	42 through 86 and 90
S-1372-312	31 through 75
S-1372-316	27 through 72
S-1372-387	5 through 50
S-1372-404	3 through 48
S-1372-426	5 through 49
S-1372-464	9 through 54
S-1372-480	25 through 69 and 88
S-1372-487	7 through 52
S-1372-517	9 through 55
S-1372-530	1 and 10 through 55
S-1372-548	7 through 51

H. District Rule 4601, Architectural Coatings

District Rule 4601 was last amended on April 16, 2020. EPA approved District Rule 4601 as amended on April 16, 2020 for inclusion in the SIP on December 14, 2022.

The purpose of this rule is to limit VOC emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements. This rule is applicable to any person who supplies, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating. This rule is applicable to any person who supplies, markets, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the San Joaquin Valley Air Pollution Control District.

The April 16, 2020 amendments to District Rule 4601 added a contingency measure for the District's 2016 Ozone Plan that would remove the exemption for specific categories of coatings sold in small containers with a volume of one liter or less if EPA issues a finding that the San Joaquin Valley Air Basin has failed to attain, or to make reasonable further progress towards attainment of the 2008 National Ambient Air Quality Standard (NAAQS) for ozone. The April 16, 2020 amendments to District Rule 4601 also implemented provisions of the 2019 California Air Resources Board (ARB) Suggested Control Measure for Architectural Coatings,² including lowering VOC limits for several categories of architectural coatings, setting VOC limits for three new categories of architectural coatings, and adding new requirements for colorants.

Section 5.1 - VOC Content Limits:

Except as provided in Sections 5.2 and 5.3, no person shall: manufacture, blend, or repackage for use within the District; or supply, sell, market or offer for sale within the District; or solicit for application or apply within the District any architectural coating or colorant with a VOC content in excess of the corresponding limit specified in Table 1 or Table 2, after the specified effective date in Table 1 or Table 2. Limits are expressed as VOC Regulatory, thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.

Rule 4601, Table 1 - VOC Content Limits for Coatings ¹		
COATING CATEGORY	Previous VOC Limit (g/l)	VOC Limit (g/l) Effective on and after 1/1/2022
Flat Coatings	50	50
Nonflat Coatings	100	50
Specialty Coatings	-	-
Aluminum Roof Coatings	400	100

² California Air Resources Board (May 2019) California Air Resources Board (CARB) Suggested Control Measure for Architectural Coatings. https://ww2.arb.ca.gov/sites/default/files/2020-05/10602_scm_final.pdf

Rule 4601, Table 1 - VOC Content Limits for Coatings ¹		
COATING CATEGORY	Previous VOC Limit (g/l)	VOC Limit (g/l) Effective on and after 1/1/2022
Basement Specialty Coatings	400	400
Bituminous Roof Coatings	50	50
Bituminous Roof Primers	350	350
Bond Breakers	350	350
Building Envelope Coatings	-	50
Concrete Curing Compounds	350	350
Concrete/Masonry Sealers	100	100
Driveway Sealers	50	50
Dry Fog Coatings	150	50
Faux Finishing Coatings	350	350
Fire Resistive Coatings	350	150
Floor Coatings	100	50
Form-Release Compounds	250	100
Graphic Arts Coatings (Sign Paints)	500	500
High Temperature Coatings	420	420
Industrial Maintenance Coatings	250	250
Low Solids Coatings ²	120	120
Magnesite Cement Coatings	450	450
Mastic Texture Coatings	100	100
Metallic Pigmented Coatings	500	500
Multi-Color Coatings	250	250
Pre-Treatment Wash Primers	420	420
Primers, Sealers, and Undercoaters	100	100
Reactive Penetrating Sealers	350	350
Recycled Coatings	250	250
Roof Coatings	50	50
Rust Preventative Coatings	250	250
Shellacs:		
Clear	730	730
Opaque	550	550
Specialty Primers, Sealers, and Undercoaters	100	100
Stains	250	100
Interior Stains		250
Stone Consolidants	450	450
Swimming Pool Coatings	340	340
Tile and Stone Sealers		100
Traffic Marking Coatings	100	100
Tub and Tile Refinish Coatings	420	420
Waterproofing Membranes	250	100
Wood Coatings	275	275
Wood Preservatives	350	350

Rule 4601, Table 1 - VOC Content Limits for Coatings ¹		
COATING CATEGORY	Previous VOC Limit (g/l)	VOC Limit (g/l) Effective on and after 1/1/2022
Zinc-Rich Primers	340	340

1 Limits are expressed as VOC Regulatory (except where noted otherwise), thinned to the manufacturer's maximum thinning recommendation, excluding any colorant added to tint bases.

2 Units are grams of VOC per liter of coating, including water and exempt compounds, in accordance with Section 3.72.

Rule 4601, Table 2 VOC Content Limits for Colorants ¹	
Colorants Added To	VOC Limit (g/l) Effective on and after 1/1/2022
Architectural Coatings, excluding Industrial Maintenance Coatings	50
Solvent Based Industrial Maintenance Coatings	600
Waterborne Industrial Maintenance Coatings	50
Wood Coatings	600

1 Limits are expressed as VOC Regulatory.

The following conditions of the proposed requirements of the facility-wide permit ensure compliance with this rule.

Permit Unit #	Permit Description	Condition #s
S-1372-0-4	Facility-Wide Permit	23-25

I. District Rule 4623, Storage Of Organic Liquids

The purpose of this rule is to limit VOC emissions from the storage of organic liquids. This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored, and any tank used in crude oil or natural gas production operations with a potential to emit six (6) tons of VOC or greater per year.

District Rule 4623 was amended on June 15, 2023 and ARB sent the amendments to EPA for inclusion in the SIP on October 16, 2023. The June 15, 2023 amendments to District Rule 4623 were intended to address California BARCT requirements pursuant to California Assembly Bill 617 by increasing the stringency of the leak detection and repair (LDAR) requirements in the rule and address deficiencies that EPA identified in the rule when compared to EPA's 2016 Control Techniques Guidelines for the Oil and Natural Gas Industry (Oil and Gas CTG)³ by adding a requirement that tanks that store organic liquids and have a potential to emit for VOC greater than or equal to six tons per year and actual VOC emissions greater than or equal to four tons per year must use vapor control systems.

³ EPA. (2016) *Control Techniques Guidelines for the Oil and Natural Gas Industry*.
<https://www.epa.gov/sites/default/files/2016-10/documents/2016-ctg-oil-and-gas.pdf>

The amendments to Rule 4623 modified stated applicability of the rule so that any tanks any tank used in crude oil or natural gas production operations with a potential to emit for VOC of six tons per year or greater are now subject to the rule; added new definitions for clarity and consistency; modified the definition of Gas Leak to lower the gas leak threshold; clarified the definition of tank for the purposes of Rule 4623; modified the exemption for tanks that hold “*clean produced water*”; reduced the maximum TVP of organic liquids stored in tanks that allow them to be exempt from the vapor control system requirements of the rule from to less than 0.1 psia and required these tanks to comply with the interior cleaning requirements of the rule; added a requirement that tanks that store organic liquids and have a potential to emit for VOC greater than or equal to six tons per year and actual VOC emissions greater than or equal to four tons per year must use vapor control systems; added requirements for tank maintenance and cleaning; phased out the Voluntary Tank Preventive Inspection and Maintenance, and Tank Cleaning Program in the tables in the rule; and mandated leak inspection and repair requirements for tanks subject to the rule.

Sentinel Peak permits the following 158 tanks and vessels that are subject to District Rule 4623: S-1372-114-3, '-115-3, '-116-3, '-117-3, '-128-7, '-129-7, '-130-7, '-131-7, '-132-5, '-209-4, '-210-4, '-211-4, '-212-4, '-213-4, '-214-4, '-215-3, '-216-3, '-217-3, '-218-7, '-219-4, '-220-4, '-221-4, '-222-4, '-224-4, '-225-4, '-226-4, '-227-3, '-235-5, '-246-4, '-247-4, '-248-4, '-249-4, '-250-4, '-251-4, '-252-4, '-253-4, '-254-4, '-255-5, '-256-5, '-257-5, '-258-4, '-259-5, '-263-7, '-264-7, '-265-7, '-266-5, '-267-7, '-268-7, '-270-3, '-271-3, '-272-3, '-273-3, '-274-4, '-275-3, '-276-3, '-278-3, '-279-3, '-280-3, '-284-3, '-285-3, '-286-3, '-289-4, '-292-3, '-293-3, '-294-3, '-313-3, '-314-3, '-315-3, '-320-3, '-322-3, '-323-4, '-324-4, '-389-3, '-390-3, '-391-3, '-392-3, '-393-3, '-405-2, '-406-1, '-407-1, '-409-2, '-410-2, '-412-1, '-416-2, '-419-0, '-420-0, '-421-0, '-427-0, '-428-0, '-430-0, '-431-0, '-432-0, '-433-0, '-434-0, '-435-0, '-441-0, '-442-0, '-443-0, '-448-0, '-449-0, '-450-0, '-470-0, '-471-0, '-472-0, '-474-0, '-477-0, '-478-0, '-481-0, '-482-0, '-489-0, '-490-0, '-491-0, '-492-0, '-495-0, '-496-0, '-497-0, '-498-0, '-501-0, '-510-0, '-511-0, '-512-0, '-513-0, '-514-0, '-515-0, '-516-0, '-518-0, '-521-0, '-522-0, '-523-0, '-524-0, '-527-0, '-528-0, '-529-0, '-531-0, '-533-0, '-534-0, '-535-0, '-537-0, '-538-0, '-540-0, '-544-0, '-546-0, '-547-0, '-550-0, '-551-0, '-552-0, '-554-0.

Per the applicant, tanks S-1372-427 and '-428 are no longer in use and have been made inoperable. Therefore, the permits have been canceled per the applicant's request.

The updated requirements of District Rule 4623 that apply to the tanks at this source are discussed below.

Section 3.0 - Definitions

- 3.14 Gas Leak: a reading in excess of the values specified in Table 1 or Table 2 as parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8.

Rule 4623, Table 1: Gas Leak (Until June 30, 2024)	
	Gas Leak
Components	Greater than 10,000

Rule 4623, Table 2: Gas Leak (After June 30, 2024)		
	Minor Gas Leak	Major Gas Leak
Components	500 to 10,000	Greater than 10,000

3.22 Leak Minimization: reducing a leak to the lowest achievable level without damaging the component using best modern practices which include, but are not limited to, adding sealing material to the component, tightening the component, or adjusting the component without shutdown of the process that the component serves and that can be safely accommodated.

3.23 Liquid Leak: the dripping of organic liquid at a rate of more than 3 drops per minute.

Section 4.0 - Exemptions

4.1.3 Tanks that are used for storage/processing of clean produced water, or other water that meets the VOC standard specified in the definition of “clean produced water” in Rule 1020 (Definitions) unless the tank has a potential to emit six (6) tons of VOC emissions or greater per year and is used in crude oil and natural gas production operations.

Tank S-1372-393 is permitted to only store clean produced water and while it is used in crude oil and natural gas production operation, it has a daily emission rate of 0.0 lb-VOC/day. Therefore, it meets the exemption of 4.1.3 and is not subject to Rule 4623

4.4 Until June 30 2024, tanks exclusively receiving and/or storing an organic liquid with a TVP less than 0.5 psia are exempt from all other requirements of the rule except for complying with the following provisions:

After June 30, 2024, tanks exclusively receiving and/or storing an organic liquid with a TVP less than 0.1 psia are exempt from all other requirements of the rule except for complying with the following provisions:

4.4.1 TVP and API Gravity Testing provisions pursuant to Section 6.2,

4.4.2 Recordkeeping provisions pursuant to Section 6.3.6,

4.4.3 Test Methods provisions pursuant to Section 6.4, and

4.4.4 Compliance schedules pursuant to Section 7.0.

4.4.5 After June 30, 2024, operators shall follow the storage tank degassing and interior cleaning requirements pursuant to Section 5.7.5 for notification, recordkeeping, tank degassing, tank cleaning, and sludge removal.

Tanks S-1372-409 and '-410 are currently permitted to only store liquids with a TVP that does not exceed 0.1 psia. Therefore, they meet the exemption of Section 4.4. The condition enforcing this exemption is revised to the following for consistency between District permits:

- *This tank shall only receive, store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.1 psia under all storage conditions. [District Rules 2201 and 4623]*

Section 5.0 - Requirements

Section 5.1 - VOC Control System Requirements

5.1.1 - General VOC Control System Requirements

Except for small producers who are required to comply with the VOC control system requirements in Section 5.1.2, an operator shall not place, hold, or store organic liquid in any tank unless such tank is equipped with a VOC control system identified in Table 3 or Table 4. The specifications for the VOC control system are described in Sections 5.2, 5.3, 5.4, 5.5, and 5.6.

Rule 4623, Table 4 – General VOC Control System Requirements after June 30, 2024				
Tank Capacity (Gallons)	True Vapor Pressure (TVP) of Organic Liquid			
	0.1 psia to <0.5 psia	0.5 psia to <1.5 psia	1.5 psia to <11 psia	≥11.0 psia
(Group A) 1,100 to 19,800	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system
(Group B) >19,800 to 39,600	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system
(Group C) >39,600	Pressure-vacuum relief valve, or internal floating roof, or external floating roof, or vapor recovery system	Internal floating roof, or external floating roof, or vapor recovery system	Internal floating roof, or external floating roof, or vapor recovery system	Pressure vessel or vapor recovery system

Tanks S-1372-114, '-115, '-116, '-117, '-215, '-216, '-217, '-219, '-224, '-225, '-226, '-227, '-259, '-270, '-271, '-272, '-273, '-275, '-276, '-278, '-279, '-280, '-284, '-285, '-286, '-289, '-292, '-293, '-294, '-313, '-314, '-315, '-320, '-430, '-431, '-432, '-433, '-434, '-435, '-442, and '-448, are currently permitted to only store liquids with a TVP greater than 0.1 psia but not exceeding 0.5 psia. Tanks '-407, '-449, and '-450 are limited to a TVP no higher than 0.2 psia, 0.11 psia, and 0.15 psia, respectively. Tank '-266 has a capacity of 21,000 gallons and is limited to a TVP no higher than 1.5 psia. Therefore, all the aforementioned tanks are required to either be equipped with a PV relief valve, or internal floating roof, or external floating roof, or vapor recovery system. Each tank is required by their current permit to be equipped with a PV relief valve and therefore, are in compliance with Table 4. However, their equipment descriptions do not reflect this. Therefore, their equipment descriptions will be corrected with the following addition: "... WITH PV RELIEF VALVE."

Tanks S-1372-128, '-129, '-131, '-142, '-143, '-144, '-209, '-210, '-211, '-212, '-213, '-214, '-218, '-220, '-221, '-235, '-246, '-248, '-249, '-250, '-251, '-252, '-253, '-254, '-255, '-256, '-257, '-258, '-263, '-264, '-265, '-267, '-268, '-274, '-323, '-324, '-389, '-390, '-391, '-392, '-405, '-406, '-412, '-416, '-419, '-420, '-421, '-441, '-443, '-474, '-477, '-478, '-481, '-482, '-489, '-490, '-491, '-492, '-495, '-497, '-498, '-501, '-510, '-511, '-512, '-513, '-514, '-515, '-516, '-518, '-521, '-522, '-523, '-524, '-527, '-528, '-529, '-531, '-533, '-534, '-535, '-537, '-538, '-540, '-544, '-546, '-547, '-550, '-551, '-552, and '-554, are served by a vapor recovery system and therefore, also in compliance with the requirements of Table 4.

5.1.1.1 If a tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, operator must install a vapor control system meeting the specifications described in Sections 5.3, 5.4, 5.5 or 5.6.

Tanks S-1372-114, '-115, '-116, '-117, '-215, '-216, '-217, '-219, '-222, '-224, '-225, '-226, '-227, '-259, '-266, '-270, '-271, '-272, '-273, '-275, '-276, '-278, '-279, '-280, '-284, '-285, '-286, '-289, '-292, '-293, '-294, '-313, '-314, '-315, '-320, '-322, '-407, '-409, '-410, '-427, '-428, '-430, '-431, '-432, '-433, '-434, '-435, '-442, '-448, '-449, '-450, '-470, '-471, and '-472 are not served by a vapor recovery system and therefore the following condition will be included on their permits to comply with Section 5.1.1.1:

- *If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623]*

5.1.2 Small Producer VOC Control System Requirements specifies VOC control requirements for tanks operated by a small producer as defined in the rule. This operation is not a small producer; therefore, this section does not apply.

5.1.3 All tanks subject to the control requirements of this rule shall be maintained in a leak-free condition, except for the following components and as allowed by Section 5.2 and applicable provisions of Table 7 through Table 9, and Section 5.7.5.4:

- 5.1.3.1 Primary seals and secondary seals of external floating roof tanks that are in compliance with the applicable requirements specified in Sections 5.3.2.1, 5.3.2.2, and 5.3.2.3.
- 5.1.3.2 Primary seals and secondary seals of internal floating roof tanks that are in compliance with the applicable requirements specified in Section 5.4.1.
- 5.1.3.3 Floating roof deck fittings that are in compliance with the applicable requirements specified in Sections 5.5.2.1.5, 5.5.2.2.5, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3.
- 5.1.3.4 Floating roof automatic bleeder vents that are in compliance with requirements specified in Sections 5.5.2.1.3 and 5.5.2.2.3 during product change provided product change is accomplished as expeditiously as practicable.

The draft permit requirements for the fixed-roof tanks at the source that are subject to the VOC control requirements of Rule 4623 and shall include the following condition:

- *The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623 (or Rule 4623)]*

Section 5.2 - Specifications for Pressure-Vacuum Relief Valve specifies requirements for pressure-vacuum relief valves that are used to comply with VOC control requirements of District Rule 4623. Pressure-vacuum relief valves shall be set to within ten (10) percent of the maximum allowable working pressure of the tank, shall be permanently labeled with the operating pressure settings, be maintained in good operating order, and shall remain in a leak-free condition except when the operating pressure exceeds the valve set pressure.

As stated in the discussion of Section 5.1.1, tanks storing liquids with a TVP greater than 0.1 psia and less than 0.5 psia are equipped with a pressure-vacuum relief valve. The following condition will remain on their permits to ensure compliance:

- *This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623]*

Section 5.3 - Specifications for External Floating Roof Tanks specifies requirements for external floating roof tanks.

There are no external floating roof tanks at the stationary source; therefore, this section is not applicable.

Section 5.4 - Specifications for Internal Floating Roof Tanks specifies requirements for internal floating roof tanks.

There are no internal floating roof tanks at the stationary source; therefore, this section is not applicable.

Section 5.5 - Floating Roof Deck Fitting Requirements specifies requirements for floating roof deck fittings.

There are no tanks with floating roof decks at the stationary source; therefore, this section is not applicable.

Section 5.6 - Specifications for Vapor Recovery Systems

5.6.1 Fixed roof tanks shall be fully enclosed and shall be maintained in a leak-free condition. An APCO-approved vapor recovery system shall consist of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall be one of the following:

5.6.1.1 A condensation or vapor return system that connects to one of the following: a gas processing plant, a field gas pipeline, a pipeline distributing Public Utility Commission quality gas for sale, an injection well for disposal of vapors as approved by the California Geologic Energy Management Division (CalGEM).

5.6.1.2 A VOC control device that reduces the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6.

5.6.2 Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling.

5.6.3 All piping, valves, and fittings shall be constructed and maintained in a leak-free condition.

As listed in Section 5.1.1, the facility also has several fixed-roof tanks at the stationary source that use vapor recovery systems to comply with the VOC control requirements of Rule 4623; the permits shall include conditions such as the following.

One of the Following Conditions for Compliance with Section 5.6.1

- *The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623 (or Rules 2201, 4401, and 4623)]*
- *The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623. [District Rules 2201 and 4623 (or Rule 4623)]*

- *The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be one of the following: 1) A condensation or vapor return system that connects to one of the following: a gas processing plant, a field gas pipeline, a pipeline distributing California Public Utility Commission quality gas for sale, or an injection well for disposal of vapors as approved by the California Geologic Energy Management Division (CalGEM); or 2) A VOC control device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623. [District Rule 4623 (or Rules 2201 and 4623)]*

Other Conditions for Compliance with Section 5.6

- *The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623 (or Rule 4623)]*
- *Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623 (or Rules 2201 and 4623)]*
- *A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623]*

Section 5.7 - Voluntary Tank Preventive Inspection and Maintenance, and Tank Interior Cleaning Program

Until June 30, 2024, operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 7 to 9 and Section 5.7.5. Pursuant to Sections 5.7.5 and 5.8, after June 30, 2024, maintenance and cleaning activities must be conducted pursuant to Section 5.7.5

Section 5.7.5 - Storage Tank Degassing and Interior Cleaning Requirements

After June 30, 2024, operators of Fixed and Floating Roof Tanks shall comply with the provisions of Section 5.7.5. Operators may disconnect from vapor recovery provided that

the procedures are performed as expeditiously as practicable and emissions are minimized to the maximum extent practicable.

Section 5.7.5.1 - Notification

Operators of storage tanks subject to the requirements of Section 5.7 shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information:

5.7.5.1.1 The PTO number and physical location of the tank being degassed,

5.7.5.1.2 The date and time that tank degassing and cleaning activities will begin,

5.7.5.1.3 The degassing method, as allowed pursuant to Section 5.7.5.4, to be used,

5.7.5.1.4 The method to be used to clean the tank, including any solvents to be used, and

5.7.5.1.5 The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport.

The draft permit requirements for the tanks at the stationary source that are subject to Rule 4623 include the following conditions:

Tanks Operating with a Pressure-Vacuum Relief Valve Pursuant to Rule 4623, Table 4:

- *The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623]*

Tanks Operating with a Vapor Recovery System Pursuant to Rule 4623, Table 4:

- *The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge,*

including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623]

Section 5.7.5.2 - Records

Operators shall maintain records of tank cleaning activities for a period of 5 years and present said records to the APCO upon request. Records should include the final details of the planned activities submitted pursuant to Section 5.7.5.1.

The draft permit requirements for the tanks at the stationary source that are subject to Rule 4623 include the following condition:

- *The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623]*

Section 5.7.5.3 - Fixed-Roof Tanks Operating Only a Pressure-Vacuum Relief Valve

5.7.5.3.1 Except for complying with Section 5.7.5.3.2 requirements, fixed-roof tanks allowed, pursuant to Tables 3, 4, 5, and 6 of this rule, to operate with a pressure-vacuum relief valve are not subject to the degassing requirements specified in Section 5.7.5.4.

5.7.5.3.2 Operators shall comply with the requirements of Section 5.2 during the process of draining, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater until June 30, 2024, or TVP of 0.1 psia or greater after June 30, 2024.

5.7.5.3.3 The requirements specified in Sections 5.1 and 5.2 shall not apply to the tank during interior cleaning or maintenance activities.

Conditions requiring compliance with the applicable tank degassing and cleaning requirements of District Rule 4623 are included in the draft requirements of the tanks that are subject to the rule as seen later in this discussion.

Section 5.7.5.4 - Tank Degassing Requirements

Except for tanks satisfying Section 5.7.5.3 provisions, the process of tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater until June 30, 2024, or TVP 0.1 psia or greater after June 30, 2024, and minimizing organic vapors in the tank vapor space by one of the following methods:

5.7.5.4.1 Exhaust VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or

5.7.5.4.2 Displace VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia until June 30, 2024, or TVP of less than 0.1 psia after June 30, 2024, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or

5.7.5.4.3 Displace VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or

5.7.5.4.4 For free-water knockout tanks, the operator may degas the tank vapor space by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced.

5.7.5.4.5 During degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system that is leak-free and meets the requirements of Section 5.6.1.1 or Section 5.6.1.2.

5.7.5.4.6 To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour.

5.7.5.4.7 Except as provided for in Section 5.7.5.4.9, the tank shall be in compliance with the applicable requirements specified in Section 5.1 through Section 5.6 during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater until June 30, 2024, or TVP of less than 0.1 psia after June 30, 2024, or greater.

5.7.5.4.8 Draining and refilling of floating roof tanks shall occur as a continuous process and shall proceed as rapidly as practicable while the roof is not floating on the surface of the stored liquid.

5.7.5.4.9 For floating-roof tanks, the gap seal requirements specified in Sections 5.3.2 and 5.4.2 shall not apply while the roof is resting on its legs, and during the processes of draining, degassing, or refilling the tank. The leak-free condition specified in Section 5.1.3 shall not apply during refilling the tank, if the operator complies with Section 5.7.5.4.8 requirements.

5.7.5.4.10 After a tank has been degassed pursuant to the provisions of Section 5.7.5 the requirements specified in Section 5.1 through Section 5.6 shall not apply until an organic liquid having a TVP of 0.5 psia or greater until June 30, 2024, or TVP of less than 0.1 psia after June 30, 2024, or greater is placed, held, or stored in the tank.

The draft permit requirements for the fixed-roof tanks at the stationary source that are served by a vapor recovery system shall include the following conditions that require compliance with Section 5.7.5.4:

- *This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623]*
- *To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]*

Section 5.7.5.5 - Tank Cleaning

5.7.5.5.1 While performing tank cleaning activities, operators may use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 °F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams per liter VOC content or less.

5.7.5.5.2 Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during the months of December through March.

The draft permit requirements for the tanks at the stationary source that are subject to Rule 4623 shall include the following conditions that require compliance with this section:

- *While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623]*

- *Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623]*

Section 5.7.5.6 - Removed Sludge

Operators of tanks containing an organic liquid with a TVP of 1.5 psia or greater shall control emissions from the removed sludge by complying with all of the following provisions:

5.7.5.6.1 During sludge removal the operator shall control emissions from the receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95 percent.

5.7.5.6.2 Operators shall transport removed sludge in closed, liquid leak-free containers.

5.7.5.6.3 Notwithstanding Section 5.7.5.6.2, operators shall store removed sludge, until final disposal, in leak-free containers, or tanks complying with Section 5.1 requirements. Sludge that is to be used to manufacture roadmix, as defined in Rule 2020 (Exemptions), is exempt from this requirement. Roadmix manufacturing operations exempt pursuant to Rule 2020, shall maintain documentation of their compliance with Rule 2020, and promptly make said documentation available to the APCO upon request.

The draft permit requirements for the tanks at the stationary source that are permitted to store organic liquid with a TVP of 1.5 psia or greater shall include the following conditions that require compliance with the sludge removal requirements of Section 5.7.5.6:

- *During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623]*
- *For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623]*
- *For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623]*

Section 5.8 - Preventive Maintenance and Interior Cleaning Requirements for Fixed Roof Tanks (Effective after June 30, 2024)

5.8.1 Conduct maintenance and cleaning activities pursuant to Section 5.7.5.

The draft permit requirements for the tanks at the stationary source that are subject to District Rule 4623 include the conditions discussed above, which require compliance with Section 5.7.5.

Section 5.9 - Inspection and Re-Inspection Requirements (Effective after June 30, 2024)

Section 5.9.1 - Determination of Compliance with the Leak Standards during District Inspection

For the purpose of this rule, a facility shall be considered in violation if one or more of the conditions specified in Sections 5.9.1.1 through 5.9.1.4 exist at the facility.

5.9.1.1 The discovery of a major gas leak greater than 10,000 ppmv.

5.9.1.2 The discovery of a liquid leak as defined in Section 3.23.

5.9.1.3 Exceeding the allowable number of minor leaks defined in Table 10.

Rule 4623, Table 10 – Allowable Leaks		
Leak Threshold	200 or Less Components Inspected*	More than 200 Components Inspected*
500-10,000ppm	5	2% of total inspected

* The maximum number of leaks in Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. Leaks counted toward the allowable leak threshold in Table 10 are still subject to the maintenance and repair requirements of Section 5.9.3 through 5.9.4.

5.9.1.4 Failure to repair leaks within the timeframes specified in Table 11.

The draft permit requirements for the tanks at the stationary source that are subject to the VOC control requirements of Rule 4623 include the following condition:

- *During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum*

number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623]

Section 5.9.2 - Determination of Compliance with the Leak Standards during Operator Inspection

For the purpose of this rule a facility shall be considered in violation if the following condition specified in Section 5.9.2.1 exists at the facility.

5.9.2.1 Failure to repair leaks within the timeframes specified in Table 11.

As shown below, the draft permit requirements for the tanks at the stationary source that are subject to the VOC control requirements of Rule 4623 include the conditions that require leaks to be repaired in the timeframes specified in Table 11.

5.9.3 A leak discovered during Operator and District Inspection(s) above the leak threshold defined in Section 3.14 and in Table 2 shall be repaired within the timeframes of Table 11.

Rule 4623, Table 11 – Repair Time Periods	
Leak Threshold	Repair Time Period
Minor Leak	14 Calendar Days
Major Leak	2 Calendar Days
Liquid Leak	2 Calendar Days

The draft permit requirements for the tanks at the stationary source that are subject to the VOC control requirements of Rule 4623 include the following conditions that require compliance with this section:

- *Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623]*
- *Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623]*

5.9.4 At least once each calendar quarter all components shall be tested for leaks, except for inaccessible components, unsafe to monitor components and floating roof tanks including their deck fittings and components.

External floating roof tanks shall be inspected once every 12 months as required by Section 6.1.3.

Internal floating roof tanks shall be inspected once every 60 months as required by Section 6.1.4.

Inspections shall be performed as allowed by the following:

5.9.4.1 All components shall be tested for leaks of total hydrocarbons in units of parts per million volume (ppmv) in accordance with US EPA Reference Method 21 as specified in Section 6.4.8.

5.9.4.2 Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months per US EPA Reference Method 21.

5.9.4.3 Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours.

5.9.4.4 Any audio-visual inspection specified in Section 5.9.4.3 that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in Table 11.

5.9.4.5 An operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service.

5.9.4.6 A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator.

5.9.4.7 Upon detection of a component with a leak concentration measured above the standards specified, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed.

5.9.4.7.1 Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement.

5.9.4.8 Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in

working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO.

Failure to comply with all of the Maintenance Requirements of Section 5.9.4.1 through 5.9.4.8 shall constitute a violation of this rule.

5.9.4.9 An operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere.

5.9.4.10 If the leak has been minimized but the leak still exceeds the applicable leak standards of this rule, an operator shall comply with at least one of the requirements of Sections 5.9.4.10.3, 5.9.4.10.4 or 5.9.4.10.5 as soon as practicable but not later than the time period specified in Table 11.

5.9.4.10.1 The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period specified in Table 11.

5.9.4.10.2 The start of the repair period shall be the time of the initial leak detection.

5.9.4.10.3 Repair or replace the leaking component; or

5.9.4.10.4 Vent the leaking component to a VOC control system as defined in Section 3.1.

5.9.4.10.5 Remove the leaking component from operation.

The draft permit requirements for the tanks subject to the VOC control requirements of Rule 4623 include the following conditions that require compliance with Section 5.9.4:

- *At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623]*
- *Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24*

hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623]

- The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623]*
- Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623]*
- All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623, 6.4.8]*
- Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623]*
- The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623]*
- If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed,*

shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623]

Section 6.0 - Administrative Requirements

Section 6.1 - Inspection of Floating Roof Tanks specifies requirements for the inspection of floating roof tanks.

The stationary source does not include any floating roof tanks; therefore, this section is not applicable.

Section 6.2 - TVP and API Gravity Testing of Stored Organic Liquid in Uncontrolled Fixed Roof Tanks

Section 6.2.1 shall not apply to tanks that exclusively store organic liquids listed in Appendix A, provided the storage temperature indicated in Appendix A is not exceeded at any time. An operator shall comply with Section 6.3.6 if the information in Appendix A is used to demonstrate the TVP and/or API gravity of the stored liquid.

Section 6.2.1 - TVP and API Gravity Testing

6.2.1.1 An operator shall conduct TVP and API testing upstream of each separator and fixed roof tank not controlled by a vapor control system per Sections 5.3, 5.4, 5.5, or 5.6 using test methods in Section 6.4 and the procedures below:

6.2.1.1.1 In lieu of testing upstream of each fixed roof tank not meeting the control systems of Sections 5.3, 5.4, 5.5, and 5.6 an operator may conduct TVP testing of a representative fixed roof tank. The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test.

6.2.1.1.2 One fixed roof tank not meeting the control systems of Sections 5.3, 5.4, 5.5, and 5.6 represents some or all of the tanks in a tank battery (defined in Section 3.41).

6.2.1.1.3 For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells.

6.2.1.1.4 The stored organic liquid in each of the represented tank is the same and came from the same source.

6.2.1.1.5 The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent.

6.2.1.1.6 An operator must maintain a sketch or diagram of the separator and tank system depicting the sampling location.

6.2.1.1.7 The TVP testing shall be conducted during the months of June through September using the actual storage temperature of the organic liquid in the tank.

6.2.1.1.8 Testing shall occur whenever there is a change in the source or type of organic liquid stored in each tank. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6.

6.2.1.1.9 An operator shall conduct a TVP and API testing of each fixed roof tank not controlled by a vapor control system per Sections 5.3, 5.4, 5.5, or 5.6 at least once every 24 months following the procedures in Section 6.2.1.

The draft permit requirements for the fixed-roof tanks at the stationary source that are not required to use vapor recovery systems include the following conditions that require compliance with Section 6.2:

- *The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623]*
- *In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623 (6/15/2023), Sections 5.3, 5.4, 5.5, and 5.6, the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of Sections Rule 4623, 5.3, 5.4, 5.5, and 5.6 may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623]*
- *The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623]*

- *Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]*

Section 6.3 - Recordkeeping

An operator shall retain accurate records required by this rule for a period of five years. Records shall be made available to the APCO upon request, except for certain records that need to be submitted as specified in the respective sections below.

6.3.1 An operator whose tanks are subject to the requirements of this rule shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. The requirement of 6.3.1 shall not apply to fixed roof tanks equipped with a vapor recovery system, external floating roof tanks, or internal floating roof tanks that meet the requirements of this rule.

6.3.2 An operator whose emergency standby tanks are required to comply with Section 4.2.1 shall maintain records showing date(s) the organic liquid is first introduced into each tank, and date(s) each tank is fully drained. Such records shall be submitted to the APCO 60 days prior to permit renewal.

6.3.3 An operator whose temporary tanks are required to comply with Section 4.2.2 shall maintain records showing the tank capacity and duration of time that the tank is used.

6.3.4 Small producers shall maintain monthly records of average daily crude oil production to determine compliance with Section 3.39. The monthly crude oil production records required by the California Geologic Energy Management Division (CalGEM) may be used to comply with the above requirement. Small producers shall also maintain monthly records of the average daily crude oil throughput of each tank to demonstrate compliance with Sections 4.3, and/or 5.1.2. Operators shall submit the required monthly records upon the request of the APCO.

The source is not a small producer; therefore, this section is not applicable.

6.3.5 An operator shall submit the reports of the floating roof tank inspections conducted in accordance with the requirements of Section 6.1 to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Sections 5.2 through 5.5. The inspection report for tanks that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and shall be made available upon request by the APCO. The inspection report shall contain all information necessary to demonstrate compliance with the provisions of this rule, including the information specified in Sections 6.3.5.1 through 6.3.5.6

The stationary source does not include any floating roof tanks; therefore, this section is not applicable.

6.3.6 An operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. An operator who uses the information in Appendix A to demonstrate the TVP and/or API gravity of the stored organic liquid shall submit information to the APCO within 45 days after the date that the type of organic liquid stored in the tank has been determined.

6.3.7 An operator shall maintain the records of the external floating roof or internal floating roof landing activities that are performed pursuant to Sections 5.3.1.3 and 5.4.3. The records shall include information on the TVP, API gravity, and type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. The operator shall keep the records at the facility (or on-site) for a period of five years. The records shall be made available to the APCO upon request.

The stationary source does not include any floating roof tanks; therefore, this section is not applicable.

6.3.8 An operator who is demonstrating that their tank PTE emissions are below six (6) tons of VOC per year or actual emissions are below four (4) tons of VOC per year shall keep an accurate record of each organic liquid stored in each tank, including storage temperature, TVP, and monthly throughput.

6.3.9 Inspection Log

The operator shall maintain an inspection log containing, at a minimum, all of the following information:

6.3.9.1 Total number of components inspected, and total number and percentage of leaking components found during inspection.

6.3.9.2 Location, type, name or description of each leaking component and description of any unit where the leaking component is found.

6.3.9.3 Date of leak detection and method of leak detection.

6.3.9.4 For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume.

- 6.3.9.5 Date of repair, replacement, or removal from operation of leaking components.
- 6.3.9.6 After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv.
- 6.3.9.7 Inspector's name, business mailing address, and business telephone number.
- 6.3.9.8 The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log.
- 6.3.9.9 Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration.
- 6.3.9.10 Copies of all records required by Section 6.3 of this rule shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, CARB, and US EPA upon request.

The draft permit requirements for the fixed-roof tanks at the source that are not required to use vapor recovery systems to comply with Rule 4623 include conditions such as the following that require compliance with Section 6.3:

- *Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]*
- *The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, API gravity, and monthly throughput. [District Rule 4623]*

The draft permit requirements for the fixed-roof tanks at the source that are required to use vapor recovery systems to comply with Rule 4623 include the following condition that requires compliance with Section 6.3:

- *The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking*

component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623]

The draft permit requirements for all of the tanks at the source that are subject to Rule 4623 include the following condition:

- *All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623]*

Section 6.4 - Test and Inspection Methods

The following test methods shall be used unless otherwise approved by the APCO and the United States Environmental Protection Agency (US EPA).

6.4.1 Analysis of halogenated exempt compounds shall be conducted using California Air Resources Board (CARB) Method 432.

6.4.2 The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products".

6.4.3 Except for crude oil subject to Section 6.4.4, the TVP of any organic liquid shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure for Petroleum Products), and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the procedures in Appendix B. Appendix B is an

excerpt from the oil and gas section of “ARB Technical Guidance Document to the Criteria and Guidelines Regulation for AB 2588”, dated August 1989. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 26° up to 30° may be determined by using other equivalent test methods approved by APCO, ARB and US EPA.

6.4.4 The latest version of the Lawrence Berkeley National Laboratory “Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph”, as approved by ARB and US EPA, shall be used to determine the TVP of crude oil with an API gravity of 26° or less, or for any API gravity that is specified in this test method.

6.4.5 An operator may use the information in Appendix A to determine the TVP of the stored organic liquid in a tank provided the storage temperature listed in Appendix A is not exceeded at any time.

6.4.6 The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported.

6.4.7 Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 “Exempt Halogenated VOCs in Gases September 12, 1990”.

6.4.8 Measurements of a gas-leak concentration shall be determined by US EPA Method 21.

6.4.8.1 After June 30, 2024, All leaks detected with the use of an OGI instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in Table 11.

The draft permit requirements for the tanks to comply with Rule 4623 include the following conditions that require use of the methods specified in Section 6.4:

- *The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of*

Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623]

- *For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623]*
- *For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623]*
- *A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623]*
- *All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623]*

The draft permit requirements for the tanks at this stationary source will comply with the applicable requirements of Rule 4623 with the aforementioned conditions discussed in this rule discussion.

J. District Rule 8051, Open Areas

The purpose of this rule is to limit fugitive dust emissions from open areas.

This rule currently applies to any open area having 0.5 acres or more within urban areas, or 3.0 acres or more within rural areas; and contains at least 1000 square feet of disturbed surface area.

District Rule 8051 was last amended on September 21, 2023 and EPA approved the September 21, 2023 amendments for inclusion in the SIP on October 4, 2024 (89 FR 80749). The September 21, 2023 amendments to District Rule 8051 incorporated a contingency measure that would lower the rural acreage applicability threshold within the rule from 3.0 acres to 1.0 acres. The amended rule specifies that this contingency measure would become applicable after the issuance of a final determination by EPA that the District has failed to meet any of the following elements for the PM_{2.5} National Ambient Air Quality Standards: (1) meet any Reasonable Further Progress requirement, (2) meet any quantitative milestone in an approved attainment plan, (3) submit any quantitative milestone report, or (4) attain the applicable PM_{2.5} National Ambient Air Quality Standard by the applicable attainment date. The September 21, 2023 amendments to District Rule 8051 also incorporated provisions for fire prevention activities on rural parcels between 1 to 3 acres that would be activated if the contingency measure became applicable.

The September 21, 2023 amendments to District Rule 8051 do not have any effect until after EPA makes a determination that the District has failed to satisfy an element of a PM_{2.5} National Ambient Air Quality Standard attainment plan. The amendments have no effect on the applicable requirements for the permit units that are subject to the rule.

Section 5.0 requires that whenever an open area is disturbed or vehicles are used in an open area, the owner/operator shall implement one or a combination of control measures indicated in Table 8051-1 to comply with the conditions of a stabilized surface at all times and to limit Visible Dust Emissions (VDE) to 20% opacity. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

The following condition of the proposed requirements of the facility-wide permit ensure compliance with this rule.

Permit Unit #	Permit Description	Condition #
S-1372-0-4	Facility-Wide Permit	32

K. 40 CFR Part 60, Subpart OOOO, Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015

Section 60.5360 states that this subpart establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO₂) emissions from affected facilities that commence construction, modification, or reconstruction after August 23, 2011, and on or before September 18, 2015.

The subpart was last amended in March 8, 2024. This amendment required continued compliance of this subpart until it either begins complying with more stringent requirements that implements subpart OOOOc or modifies or reconstructs after December 6, 2022, and thus becomes subject to subpart OOOOb of this part. In addition, the amendment added requirements for super-emitter events in Section 60.5371. The subpart defines a super-emitter event as “any emissions event that is located at an individual well site or compressor station and that is detected using remote detection methods and has a quantified emission rate of 100 kg/hr of methane or greater.”

Facility S-1372 is an affected facility per the following listed in Section 60.5365:

- (a) Each gas well affected facility, which is a single natural gas well.
- (e) Each storage vessel affected facility, which is a single storage vessel located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission and storage segment, and has the potential for VOC emissions equal to or greater than 6 tons per year (tpy) as determined according to this section by October 15, 2013, for Group 1 storage vessels and by April 15, 2014, or 30 days after startup (whichever is later) for Group 2 storage vessels, except as provided in paragraphs (e)(1) through (4) of this section. The potential for VOC emissions must be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production prior to the applicable emission determination deadline specified in this section. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a Federal, State, local or Tribal authority.

Several well operations are permitted at facility S-1372 that produce gas. However, a review of the units show that they were not constructed, modified and reconstructed after August 23, 2011, and on or before September 18, 2015. Of the tanks permitted at S-1372, tanks S-1372-224, ‘-225, and ‘-226 have an annual potential to emit greater than 6 tpy and were last modified in 2012. Therefore, S-1372 is an affected facility subject to Subpart OOOO. However, the facility is not a super-emitter event. Therefore, continued compliance is expected until it becomes subject to Subpart OOOOb.

L. 40 CFR Part 60, Subpart OOOOa – Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015 and On or Before December 6, 2022

Pursuant to Section 60.5360a – What is the Purpose of this Subpart?, this subpart establishes emission standards and compliance schedules for the control of the pollutant greenhouse gases (GHG). The greenhouse gas standard in this subpart is in the form of a limitation on emissions of methane from affected facilities in the crude oil and natural

gas source category that commence construction, modification, or reconstruction after September 18, 2015, and on or before December 6, 2022. This subpart also establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO₂) emissions from affected facilities in the crude oil and natural gas source category that commence construction, modification, or reconstruction after September 18, 2015, and on or before December 6, 2022.

Pursuant to Section 60.5365a, owners and operators of one or more of the onshore affected facilities listed in paragraphs (a) through (j) of this section for which construction, modification, or reconstruction commenced after September 18, 2015, and on or before December 6, 2022 are subject to this subpart. Facilities located inside and including the Local Distribution Company (LDC) custody transfer station are not subject to this subpart. An affected facility must continue to comply with the requirements of this subpart until it begins complying with a more stringent requirement, that applies to the same affected facility, in an approved, and effective, state or Federal plan that implements subpart OOOOc of this part, or modifies or reconstructs after December 6, 2022, and thus becomes subject to subpart OOOOb of this part.

The following listed affected facility may apply to facility S-1372:

- (a) Each well affected facility, which is a single well that conducts a well completion operation following hydraulic fracturing or refracturing. The provisions of this paragraph do not affect the affected facility status of well sites for the purposes of § 60.5397a.
- (e) Each storage vessel affected facility, which is a single storage vessel as specified in paragraph (e)(1), (2), or (3) of this section.

Sections (e)(1), (2), or (3) are specified as storage vessels with a potential for VOC emissions equal to or greater than 6 tpy.

The wells permitted at S-1372 are steam/thermally enhanced oil recovery operations and do not utilize hydraulic fracturing or refracturing. In addition, storage vessels that have that commenced construction, modification, or reconstruction after September 18, 2015, and on or before December 6, 2022 do not have a potential to emit 6 tons-VOC per year or greater. Therefore, facility S-1372 is not subject to Subpart OOOOa.

M. 40 CFR Part 60, Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022

Pursuant to Section 60.5360b - What is the purpose of this subpart?, this subpart establishes emission standards and compliance schedules for the control of GHG. The greenhouse gas standard in this subpart is in the form of a limitation on emissions of methane from affected facilities in the crude oil and natural gas source category that commence construction, modification, or reconstruction after December 6, 2022. This subpart also establishes emission standards and compliance schedules for the control

of volatile organic compounds (VOC) and sulfur dioxide (SO₂) emissions from affected facilities in the crude oil and natural gas source category that commence construction, modification, or reconstruction after December 6, 2022.

Pursuant to Section 60.5365b, owners and operators of one or more of the onshore affected facilities listed in paragraphs (a) through (i) of this section for which construction, modification, or reconstruction commenced after December 6, 2022. Facilities located inside and including the Local Distribution Company (LDC) custody transfer station are not subject to this subpart.

The following listed affected facilities may apply to facility S-1372:

- (a) Each well affected facility, which is a single well drilled for the purpose of producing oil or natural gas.
 - (1) In addition to Section 60.14, a “modification” of an existing well occurs when:
 - (i) An existing well is hydraulically fractured, or
 - (ii) An existing well is hydraulically refractured.
 - (2) For the purposes of a well affected facility, a liquids unloading event is not considered to be a modification.
 - (3) Except as provided in Section 60.5365b(e)(3)(ii)(C) and (i)(3)(ii), any action described by paragraphs (a)(1)(i) and (ii) of this section, by itself, does not affect the modification status of process unit equipment, centrifugal or reciprocating compressors, pumps, or process controllers.
- (e) Each storage vessel affected facility, which is a tank battery that has the potential for emissions as specified in either paragraph (e)(1)(i) or (ii) of this section. A tank battery with the potential for emissions below both of the thresholds specified in paragraphs (e)(1)(i) and (ii) of this section is not a storage vessel affected facility provided the owner/operator keeps records of the potential for emissions calculation for the life of the storage vessel or until such time the tank battery becomes a storage vessel affected facility because the potential for emissions meets or exceeds either threshold specified in either paragraph (e)(1)(i) or (ii) of this section.
 - (1)
 - (i) Potential for VOC emissions equal to or greater than 6 tons per year (tpy) as determined in paragraph (e)(2) of this section.
 - (ii) Potential for methane emissions equal to or greater than 20 tpy as determined in paragraph (e)(2) of this section.

However as discussed earlier, the wells permitted at S-1372 are steam/thermally enhanced oil recovery operations and do not utilize hydraulic fracturing or refracturing. In addition, storage vessels that have that commenced construction, modification, or reconstruction after December 6, 2022 do not have a potential to emit 6 tons-VOC per year or greater. Therefore, facility S-1372 is not subject to Subpart OOOOb.

N. 40 CFR Part 60, Subpart OOOOc – Emissions Guidelines for Greenhouse Gas Emissions from Existing Crude Oil and Natural Gas Facilities

Pursuant to Section 60.5360b(a), this subpart establishes emission standards and compliance schedules for the control of GHG from designated facilities in the crude oil and natural gas source category as defined in the Model Rule at Section 60.5430c, in accordance with section 111(d) of the Clean Air Act and subpart Ba of this part.

This subpart requires the State of California to submit a plan to the U.S. Environmental Protection Agency (EPA) that implements the emission guidelines contained within the subpart. Since this is a requirement placed upon the state, rather than the source, no requirements from this subpart will be included in the Title V operating permit for the source.

O. 40 CFR Part 64, Compliance Assurance Monitoring

40 CFR Part 64 requires Compliance Assurance Monitoring (CAM) for units that meet the following three criteria:

- 1) the unit must have an emission limit for the pollutant;
- 2) the unit must have add-on controls for the pollutant; these are devices such as flue gas recirculation (FGR), baghouses, and catalytic oxidizers; and
- 3) the unit must have a pre-control potential to emit of greater than the major source thresholds.

Pollutant	Major Source Threshold (lb/year)
NO _x	20,000
SO _x	140,000
PM ₁₀	140,000
CO	200,000
VOC	20,000

§64.1 defines a control device as equipment, other than inherent process equipment, that is used to destroy or remove air pollutant(s) prior to discharge to the atmosphere. In addition, a control device does not include passive control measures that act to prevent pollutants from forming such as seals, lids, or process design features.

a. Tanks Equipped with a Pressure Relief Devices

As seen in practice, most tanks used in the production of crude oil and natural gas – as seen with this facility – are typically already equipped with a pressure relief device to increase the safe and proper functioning of the tank. The pressure relief device allows the tank to maintain a safe operating pressure and ensures valuable gases that the operator intends to recover does not escape in an uncontrolled manner. Inherent process equipment is explicitly excluded from the definition of control device as defined in 40 CFR 64. Therefore, these tanks are not subject to CAM.

b. Tanks Connected to Vapor Recovery Systems

The District has determined that vapor recovery systems are process equipment inherent to the operation of tank batteries. The vapor control system is used to increase the safe and proper functioning of the tank battery by reducing emissions of H₂S (a toxic substance) from the tank(s) and reducing corrosion in the tank(s) vapor space by eliminating the intrusion of ambient air. As stated earlier, inherent process equipment is explicitly excluded from the definition of control device as defined in 40 CFR 64 and therefore, these tanks are not subject to CAM.

c. Thermally Enhanced Oil Recovery (TEOR) Operations

For TEOR operations, the District has determined that the vapor piping is an "inherent process equipment". Such a network is an array of pipes that connect the wells and are used to route the vapors to their destination. The piping network is inherent to the TEOR system and therefore the TEOR operations are not subject to CAM.

d. Flares

The flares permitted at this facility are used as a control device for other units at the stationary source and do not have any add-on control devices themselves. Therefore, they are not subject to CAM.

e. Steam Generators

The steam generators have emission limits and add-on control devices. In this case, flue gas recirculation (FGR) is used as a control device for NO_x emissions. The steam generators also have low NO_x burners. However, the low NO_x burners are not bolt-on control devices and an inherent component of the steam generator. Therefore, pre-control emissions would be a result of steam generators with low NO_x burners operating without an FGR.

In order to be subject to CAM, each steam generator must also be a pre-control major source for NO_x emissions. Since steam generators are not source tested with and

without the FGR system operating, the effectiveness of the FGR system must be determined through other means in order to calculate the pre-control potential to emit NOx.

EPA AP-42, Table 1.4-1 lists the following emission factors for boilers with a heat input less than 100 MMBtu/hr.

EPA AP-42 Emission Factors	
	Emissions Factor (lb-NOx per MMscf)
Uncontrolled	100
Controlled – low NOx burners	50
Controlled – Low NOx burners/Flue gas recirculation	32

The effectiveness of the FGR (in % NOx reduction) is calculated as follows:

$$\frac{(50 - 32) \text{ lb} - \text{NOx/MMscf}}{50 \text{ lb} - \text{NOx/MMscf}} \times 100\% = 36\%$$

Therefore, the FGR reduces NOx emissions by 36%.

The pre-FGR emission factor is calculated based on a steam generator with a permitted NOx level of 9 ppmv (0.011 lb/MMBtu) and is calculated as follows:

$$\frac{0.011 \text{ lb} - \text{NOx/MMBtu}}{100\% - 36\%} = 0.0172 \frac{\text{lb} - \text{NOx}}{\text{MMBtu}}$$

Therefore, assuming the major source threshold for NOx is met, the heat input (MMBtu/hr) of a steam generator with a NOx limit of 9 ppmv can be calculated as follows:

$$\frac{20,000 \text{ lb} - \text{NOx}}{\text{year}} \times \frac{\text{MMBtu}}{0.0172 \text{ lb} - \text{NOx}} \times \frac{1 \text{ year}}{8,760 \text{ hours}} = 132.7 \frac{\text{MMBtu}}{\text{hour}}$$

Since none of the steam generators have a NOx level greater than 9 ppmv and a heat input of 132.7 MMBtu, none of the steam generators are pre-FGR major sources of NOx and, as such, are not subject to CAM.

f. Stationary Turbines

The stationary turbines permitted at this facility have demonstrated their compliance with CAM in a past TV renewal. Since these units have not been modified since, continued compliance is expected.

P. 40 CFR Part 82, Subpart F, Stratospheric Ozone

The purpose of 40 CFR Part 82 Subpart F is to reduce emissions of class I and class II refrigerants and their substitutes to the lowest achievable level by maximizing the recapture and recycling of such refrigerants during the service, maintenance, repair, and disposal of appliances and restricting the sale of refrigerants consisting in whole or in part of a class I and class II ODS in accordance with Title VI of the Clean Air Act.

These regulations apply to any person servicing, maintaining, or repairing appliances. This subpart also applies to persons disposing of appliances, including small appliances and motor vehicle air conditioners. In addition, this subpart applies to refrigerant reclaimers, technician certifying programs, appliance owners and operators, manufacturers of appliances, manufacturer of recycling and recovery equipment, approved recycling and recovery equipment testing organizations, persons selling class I or class II refrigerants or offering class I or class II refrigerants for sale, and persons purchasing class I or class II refrigerants.

The two most recent amendments to 40 CFR Part 82 Subpart B were on April 10, 2020 (85 FR 14171) and June 13, 2024 (89 FR 50463). The April 10, 2020 amendments revised the appliance maintenance and leak repair provision requirements for substitute refrigerants so they apply only to equipment using refrigerant containing an ozone-depleting substance. These amendments were based on changes to the legal interpretation regarding regulatory refrigerant management requirements. The June 13, 2024 amendments listed several substitutes as acceptable, subject to use conditions, for retail food refrigeration, commercial ice machines, industrial process refrigeration, cold storage warehouses, and ice skating rinks. The June 13, 2024 amendments also incorporated by reference standards that establish requirements for commercial refrigerating appliances and commercial ice machines, safe use of flammable refrigerants, and safe design, construction, installation, and operation of refrigeration systems. The June 13, 2024 amendments also exempted propane, in the refrigerated food processing and dispensing end-use, from the prohibition under the Clean Air Act from knowingly venting, releasing, or disposing of substitute refrigerants in the course of maintaining, servicing, repairing or disposing of an appliance or industrial process refrigeration based on EPA's determination that such venting, release, or disposal of this substance does not pose a threat to the environment.

The amendments to this subpart do not have any effect on the current permit requirements and, therefore, will not be addressed further in this evaluation.

The following condition of the proposed requirements of the facility-wide permit ensure compliance with this rule.

Permit Unit #	Permit Description	Condition #
S-1372-0-4	Facility-Wide Permit	27

IX. PERMIT SHIELD

A permit shield legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Title V permit. Compliance with the terms and conditions of the Operating Permit is considered compliance with all applicable requirements upon which those conditions are based, including those that have been subsumed.

A. Requirements Addressed by Model General Permit Templates

The applicant does not propose to use any model general permit templates.

B. Requirements not Addressed by Model General Permit Templates

No extra permit shields have been proposed. The standard permit shields that were already on permits will remain.

C. Obsolete Permit Shields From Existing Permit Requirements

Obsolete permit shields have been addressed in the earlier in Section VI.B.

X. PERMIT CONDITIONS

See Attachment A - Draft Renewed Title V Operating Permit.

XI. ATTACHMENTS

- A. Draft Renewed Title V Operating Permit
- B. Previous Title V Operating Permit
- C. Detailed Facility Report

ATTACHMENT A

Draft Renewed Title V Operating Permit

San Joaquin Valley

Air Pollution Control District

FACILITY: S-1372-0-4

EXPIRATION DATE: 05/31/2021

FACILITY-WIDE REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)]
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)]
3. {4364} The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. {4365} Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. {4366} The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. {4367} A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040]
8. {4369} The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: SENTINEL PEAK RESOURCES CA LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, CA
S-1372-0-4 : 10/22/2025 1:12:54 PM -- MAKM

9. {4370} The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. {4371} The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit
11. {4372} Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit
12. {4373} If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit
13. {4374} It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit
14. {4375} The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit
15. {4376} The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit
16. {4377} The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit
17. {4378} The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit
18. {4379} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit
19. {4380} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
20. {4381} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit
21. {4382} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

22. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
23. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 2 for use or sale within the District. [District Rule 4601] Federally Enforceable Through Title V Permit
24. All VOC-containing materials subject to Rule 4601 shall be stored in closed containers when not in use. [District Rule 4601] Federally Enforceable Through Title V Permit
25. {4386} The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
26. {4387} With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
27. {4388} If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
28. {4389} If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
29. {4390} Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit
30. {4391} Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8031] Federally Enforceable Through Title V Permit
31. {4392} An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8041] Federally Enforceable Through Title V Permit
32. {4393} Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit
33. {4394} Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8061] Federally Enforceable Through Title V Permit
34. {4395} Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. {4396} Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit
36. {4397} The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit
37. {4398} The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit
38. {4399} When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit
39. {4400} Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. Particulate matter emissions from any permit unit at this facility shall not exceed 0.1 grain/dscf. If the equipment is fired, particulate matter emissions shall not exceed 0.1 grains/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
42. Sulfur compound emissions from any permit unit at this facility shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the units only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds for each unit by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
43. Nitrogen oxide (NO_x) emissions from any permit unit at this facility shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2 and 2520, 9.4.2]
44. {533} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
46. All records shall be retained on-site for a period of at least five years, and made available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. When applicable to 40 CFR Part 68, a subject facility shall submit to the proper authority a Risk Management Plan when mandated by the regulation. [40 CFR Part 68] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

48. This facility is located west of interstate 5 in Kern County. Therefore, the requirements of District Rule 4351 (Amended October 19, 1995) do not apply to any equipment at this facility. A permit shield is granted from this Rule. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. On June 30, 2002, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin July 1 of every year, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-2-31

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

32.0 MMBTU/HR TEOR/NATURAL GAS-FIRED STEAM GENERATOR #5 (DIS #44826-70) WITH NORTH AMERICAN MAGNA-FLAME 4211-32-LE LOW-NOX BURNER WITH FGR AND O2 CONTROLLER (GAMBLE LEASE)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
6. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
7. This equipment is approved to be operated at the following locations: Sec. 06, T30S/R22E, Sec.'s 23 & 24, T31S/R22E; and Sec. 10, T31S/R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Vapors from TEOR operation, permit # S-1372-100 may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.939 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 111 ppmvd CO @ 3% O2 or 0.081 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.939 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 111 ppmvd CO @ 3% O2 or 0.081 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Flare S-1372-100 shall only be used to incinerate TEOR vapors when one or more of steam generators S-1372-1, '2 or '4 are not in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Total sulfur oxide (SOx as SO2) emissions shall not exceed 1,075.2 lb/day from steam generators S-1372-1, '2, '4, '127, '317, and flare '100. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Sulfur content of TEOR gas and fuel gas shall be demonstrated quarterly by detection tube sampling or other District approved methods. [District Rule 1081] Federally Enforceable Through Title V Permit
16. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-100 so that at least 95% by weight of the sulfur is removed. [District Rule 4320] Federally Enforceable Through Title V Permit
17. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
18. The SOx emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO2, inlet" is equal to the concentration of SOx (expressed as SO2) at the inlet side of the SOx emission control system (in lb/dscf) and "CSO2, outlet" is equal to the concentration of SOx (expressed as SO2) at the outlet side of the SOx emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
19. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520] Federally Enforceable Through Title V Permit
25. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
37. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
38. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
40. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
41. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
42. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520] Federally Enforceable Through Title V Permit
44. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520] Federally Enforceable Through Title V Permit
45. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520] Federally Enforceable Through Title V Permit
46. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
47. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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49. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
50. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520 and 4801] Federally Enforceable Through Title V Permit
51. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
52. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-4-26

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#4) (DIS #44784-67) WITH NORTH AMERICAN MAGNA-FLAME 4211-25-LE LOW-NOX BURNER WITH FGR AND O2 CONTROLLER (GAMBLE LEASE)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
6. Vapors from TEOR operation, permit # S-1372-100 may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Sulfur content of TEOR gas and fuel gas shall be demonstrated quarterly by detection tube sampling or other District approved methods. [District Rules 1081 and 2520] Federally Enforceable Through Title V Permit
8. No emission reduction credit shall be granted for this steam generator while it is part of the approved 4405 alternate emission limit plan. [District Rule 4405] Federally Enforceable Through Title V Permit
9. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.088 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.088 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Flare S-1372-100 shall only be used to incinerate TEOR vapors when one or more of steam generators S-1372-1, '2 or '4 are not in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Total sulfur oxide (SOx as SO2) emissions shall not exceed 1,075.2 lb/day from steam generators S-1372-1, '2, '4, '127, '317 and flare '100. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-100 so that at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
16. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
17. The SOx emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO2, inlet" is equal to the concentration of SOx (expressed as SO2) at the inlet side of the SOx emission control system (in lb/dscf) and "CSO2, outlet" is equal to the concentration of SOx (expressed as SO2) at the outlet side of the SOx emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
18. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
36. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
37. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
39. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
40. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
41. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
42. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520] Federally Enforceable Through Title V Permit
43. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520] Federally Enforceable Through Title V Permit
44. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520] Federally Enforceable Through Title V Permit
45. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
46. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
49. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520] Federally Enforceable Through Title V Permit
50. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
51. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-8-34

EXPIRATION DATE: 05/31/2021

SECTION: NW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

32 MMBTU/HR J.F. NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#10) (DIS# 44510-76) WITH NORTH AMERICAN LOW NOX BURNER, FGR, AND O2 CONTROLLER (E&M LEASE)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Approved locations for this equipment: Sec. 16, T31S/R22E (Bremer Lease) and SW/4 of Sec. 10, T31S/R22E (E&M Lease). [District Rule 2201] Federally Enforceable Through Title V Permit
8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.014 lb-PM10/MMBtu, 138 ppmvd CO @ 3% O2 or 0.1 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.014 lb-PM10/MMBtu, 138 ppmvd CO @ 3% O2 or 0.1 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Total SOx (as SO2) emissions shall not exceed 1578.08 lb/day for the following steam generators: S-1372-8 (#10), S-1372-17 (#19); S-1372-18 (#28), S-1372-19 (#29), and S-1372-20 (#30). [District Rule 2201] Federally Enforceable Through Title V Permit
14. When burning TEOR gas, steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When burning TEOR gas, sulfur compound (SO2) emission limit compliance shall be demonstrated by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
16. When burning TEOR gas, compliance with casing gas sulfur compound emission limits shall be demonstrated by record keeping of TEOR gas flowrate and H2S concentration. [District Rule 1070] Federally Enforceable Through Title V Permit
17. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-74 so that at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
18. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
19. The SOx emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO2, inlet" is equal to the concentration of SOx (expressed as SO2) at the inlet side of the SOx emission control system (in lb/dscf) and "CSO2, outlet" is equal to the concentration of SOx (expressed as SO2) at the outlet side of the SOx emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
20. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520] Federally Enforceable Through Title V Permit
26. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
36. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
38. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
40. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
41. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
42. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306, 4320 and 4351] Federally Enforceable Through Title V Permit
43. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
44. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520] Federally Enforceable Through Title V Permit
45. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520] Federally Enforceable Through Title V Permit
46. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520] Federally Enforceable Through Title V Permit
47. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
50. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
51. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520] Federally Enforceable Through Title V Permit
52. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
53. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-10-25

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#11) (DIS# 44511-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER (BREMER LEASE)

PERMIT UNIT REQUIREMENTS

1. Steam generator shall only receive TEOR gas from TEOR permit S-1372-77, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on the TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
2. When complying with SOx emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520] Federally Enforceable Through Title V Permit
3. When complying with SOx emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520] Federally Enforceable Through Title V Permit
4. Emissions shall not exceed any of the following: PM10: 0.014 lb/MMBtu; NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @ 3% O2; VOC: 0.0003 lb/MMBtu; or CO: 138 ppmv @ 3 % O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. SOx (as SO2) emissions shall not exceed 46.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Steam generators S-1372-10, -14, -23, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on PUC quality natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Compliance with gas fired sulfur compound (SO2) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
8. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520] Federally Enforceable Through Title V Permit
14. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
24. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
27. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
28. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
29. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
31. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
32. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520] Federally Enforceable Through Title V Permit
34. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520] Federally Enforceable Through Title V Permit
35. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and] Federally Enforceable Through Title V Permit
38. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
39. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520] Federally Enforceable Through Title V Permit
40. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-13-30

EXPIRATION DATE: 05/31/2021

SECTION: NW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#16) (DIS# 12667-79) EQUIPPED WITH A NORTH AMERICAN G-LE ULTRA LOW-NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
4. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. This steam generator is approved to operate at the following locations: NW/4 Section 10, NW/4 Section 23 of T31S, R22E, and NW/4 Section 10 of T29S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Steam generator shall only receive TEOR gas from TEOR permit S-1372-316 (which may receive gas from TEOR permit S-1372-76) and the sulfur content of the combined TEOR gases shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal using the sulfur scrubber listed on TEOR permit S-1372-316 prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
10. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
11. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. SO_x (as SO₂) emissions shall not exceed 123.2 lb/day except as provided in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Steam generator S-1372-317 shall be exclusively fired on PUC quality natural gas when this steam generator is incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Total casing gas sulfur oxide (SO_x as SO₂) emissions shall not exceed 1,193.5 lb/day for the following steam generators and standby flare: S-1372-13 (#16), S-1372-16 (#12), S-1372-24 (#20), and S-1372-76. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Emissions shall not exceed any of the following: PM₁₀: 0.014 lb/MMBtu; NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmv @ 3% O₂; VOC: 0.003 lb/MMBtu; or CO: 138 ppmv @ 3% O₂. [District Rule 2201 and District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
36. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
39. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
40. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
44. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-14-28

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#13 BREMER, DIS# 44521-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, O2 CONTROLLER AND FGR

PERMIT UNIT REQUIREMENTS

1. Steam generator shall only receive TEOR gas from TEOR permit S-1372-77, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
2. When complying with SOx emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520] Federally Enforceable Through Title V Permit
3. When complying with SOx emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
4. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Emissions shall not exceed any of the following: PM10: 0.014 lb/MMBtu; NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @ 3% O2; VOC: 0.003 lb/MMBtu; or CO: 138 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. SOx (as SO2) emissions shall not exceed 46.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Steam generators S-1372-10, -14, -23, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on PUC quality natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Compliance with gas fired sulfur compound (SO2) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
9. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
29. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
32. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
39. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-16-28

EXPIRATION DATE: 05/31/2021

SECTION: NW 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#12) (DIS# 44519-76) EQUIPPED WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER AND EXHAUST GAS CONNECTED TO SCRUBBER/ESP LISTED ON S-1372-127 (MCKITTRICK FRONT LEASE)

PERMIT UNIT REQUIREMENTS

1. This steam generator is approved to operate at the following locations: Sec. 23, T31S, R22E, NW 1/4 Sec. 6, T30S, R22E, and NW 1/4 Sec. 10, T29S, R21E [District Rule 2201] Federally Enforceable Through Title V Permit
2. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
3. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The steam generator shall be equipped with piping from TEOR operation S-1372-100 to fuel gas inlet on burner when operating at Sec. 23, T31S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
5. SOx (as SO2) emissions from steam generator shall not exceed 180.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Total casing gas sulfur oxide (SOx as SO2) emissions shall not exceed 1,193.5 lb/day for the following steam generators and standby flare: S-1372-13 (#16), S-1372-16 (#12), S-1372-24 (#20), and S-1372-76. SOx as SO2 emissions from '-16 shall be calculated as [(mscf combusted in '-16)/(combined mscf combusted in '-16, '-127, and '-317)] x total SOx emissions from scrubber/ESP '-127. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. Except during startup and shutdown emissions shall not exceed any of the following: PM10: 0.014 lb/MMBtu; NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @ 3% O2; VOC: 0.0012 lb/MMBtu; or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Compliance with 95% by weight sulfur removal efficiency requirement shall be conducted annually. [District Rule 4320] Federally Enforceable Through Title V Permit
11. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
27. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
29. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
30. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
31. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, , 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
33. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
34. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCO performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCO performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
40. Permittee shall maintain daily records of SO_x (as SO₂) emissions (lb/day) from steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
41. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
43. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-17-35

EXPIRATION DATE: 05/31/2021

SECTION: SW22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#19) (DIS# 45002-80)
EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
4. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Steam generator shall only receive TEOR gas from TEOR permit S-1372-312 (which may receive TEOR gas from permit S-1372-77) and the sulfur content of the combined TEOR gases shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal using the scrubber listed on TEOR permit S-1372-312 prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
8. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520] Federally Enforceable Through Title V Permit
9. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
10. Steam generators S-1372-1 and -17 shall not be located simultaneously at any of the following locations: Sec. 22, T32S, R23E; NE/4 & SE/4 Sec. 21, T32S, R23E; NW/4 & NE/4 Sec. 27, T32S, R23E; and NE/4 Sec. 28, T32S, R23E. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. No less than 0.35 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.048 lb-PM₁₀/MMBtu, 400 ppmvd CO @ 3% O₂ or 0.3 lb-CO/MMBtu, or 0.0006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. SO_x (as SO₂) emissions shall not exceed 95.5 lb/day except as provided in the condition below. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total casing gas sulfur oxide (SO_x as SO₂) emissions shall not exceed 1,578.1 lb/day for the following steam generators: S-1372-8 (#10), S-1372-17 (#19); S-1372-18 (#28), S-1372-19 (#29), and S-1372-20 (#30). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when this steam generator is gas-fired and incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Sulfur compound (SO₂) emission limit compliance shall be demonstrated by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Compliance with casing gas sulfur compound emission limits shall be demonstrated by record keeping of TEOR gas flowrate and H₂S concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
36. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
38. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
40. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
41. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
42. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
43. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
44. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
45. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
47. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
50. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
51. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
52. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
53. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

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San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-18-29

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (#28 DIS# 45003-80)
EQUIPPED WITH FLUE GAS RECIRCULATION (FGR)

PERMIT UNIT REQUIREMENTS

1. No less than 0.35 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Steam generator shall only receive TEOR gas from TEOR permit S-1372-77, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
3. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
4. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: PM₁₀: 0.064 lb/MMBtu; VOC: 0.006 lb/MMBtu; NO_x: 0.008 lb/MMBtu or 7 ppmv @ 3% O₂ and CO: 138 ppmv @ 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Total casing gas sulfur oxide (SO_x as SO₂) emissions shall not exceed 1578.08 lb/day for the following steam generators: S-1372-8 (#10), S-1372-17 (#19); S-1372-18 (#28), S-1372-19 (#29), and S-1372-20 (#30). [District Rule 2201] Federally Enforceable Through Title V Permit
7. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when this steam generator is gas-fired and incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Sulfur compound (SO₂) emission limit compliance shall be demonstrated by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
9. Compliance with casing gas sulfur compound emission limits shall be demonstrated by record keeping of TEOR gas flowrate and H₂S concentration. [District Rule 1070] Federally Enforceable Through Title V Permit
10. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
29. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
30. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
32. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
33. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
38. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
40. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
41. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-19-32

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#29) (DIS# 45004-80)
EQUIPPED WITH A NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR

PERMIT UNIT REQUIREMENTS

1. No less than 0.35 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Uncondensed vapors from TEOR operation, permit # S-1372-77, may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
3. SO_x (as SO₂) emissions shall not exceed 95.5 lb/day except as provided below. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Total casing gas sulfur oxide (SO_x as SO₂) emissions shall not exceed 1,578.1 lb/day for the following steam generators: S-1372-8 (#10), S-1372-17 (#19); S-1372-18 (#28), S-1372-19 (#29), and S-1372-20 (#30). [District Rule 2201] Federally Enforceable Through Title V Permit
5. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on PUC quality natural gas when this steam generator is gas-fired and incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The owner of any unit operated under the exemption of natural gas curtailment shall monitor and record for each unit the cumulative annual hours of operation on each liquid fuel during curtailment and testing. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed any of the following: 27 lb NO_x/day, 4,380 lb NO_x/year. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
10. Except during startup and shutdown emissions shall not exceed any of the following: PM₁₀: 0.0076 lb/MMBtu; NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmv @ 3% O₂; VOC: 0.006 lb/MMBtu; or CO: 138 ppmv @ 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-77 so that at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
12. Compliance with 95% by weight sulfur removal efficiency requirement shall be demonstrated annually. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
14. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
19. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
29. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
33. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
34. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit
36. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
41. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
44. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-20-29

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#30) (DIS# 45005-80) EQUIPPED WITH A NORTH AMERICAN, MODEL MAGNA-FLAME G-LE, LOW NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No less than 0.35 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Noncondensable vapors from TEOR operation, permit # S-1372-77, may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapor recovery gas burned in this device shall first be treated by a sulfur removal system so that at least 95% by weight of the sulfur is removed [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
5. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when this steam generator is gas-fired and incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
7. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.0637 lb-SOx/MMBtu, 0.064 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.0637 lb-SOx/MMBtu, 0.064 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Total SO_x (as SO₂) emissions shall not exceed 1,578.1 lb/day for the following steam generators: S-1372-8 (#10), S-1372-17 (#19); S-1372-18 (#28), S-1372-19 (#29), and S-1372-20 (#30). [District Rule 2201] Federally Enforceable Through Title V Permit
12. Sulfur compound (SO₂) emission limit compliance shall be demonstrated by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
13. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
14. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
19. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
29. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
41. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
44. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

45. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-24-32

EXPIRATION DATE: 05/31/2021

SECTION: NW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#20 DIS# 45220-81) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
4. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Steam generator shall only receive TEOR gas from TEOR permit S-1372-316 (which may receive gas from TEOR permit S-1372-76) and the sulfur content of the combined TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal using the sulfur scrubber listed on TEOR permit S-1372-316 prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
8. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320, 5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
9. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. When located at NW section 10, T29S, R21E, this unit shall be fired on natural gas. The SO₂ scrubber is not required at this location. [District Rule 2080] Federally Enforceable Through Title V Permit
11. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. No less than 0.4 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Emissions shall not exceed PM10: 0.014 lb/MMBtu; SO_x (as SO₂): 123.4 lb/day; NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmv @ 3% O₂; VOC: 0.0004 lb/MMBtu; or CO: 138 ppmv @ 3% O₂. [District Rule 2201 and District Rules 4305, 5.1, 4306, 5.1, and 4320] Federally Enforceable Through Title V Permit
14. Compliance with gas fired sulfur compound (SO₂) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
15. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
31. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
43. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
46. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
48. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-29-33

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

30.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR #23 (DIS #45223-80) WITH NORTH AMERICAN MAGNA-FLAME G-LE LOW NOX BURNER, FGR, AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. No less than 0.179 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
8. This equipment is approved to be operated at the following locations: Section 8, T30S/R22E; and SE/4 Section 10, T31S/R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Sulfur content of natural gas shall not exceed 0.35 gr S/100 dscf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall measure and record the natural gas sulfur content and BTU content at the time of NOx testing, except for natural gas purchased from a PUC regulated utility. [District Rule 4406, 4.0]
12. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
13. No emission reduction credit shall be granted for this steam generator until it is removed from the approved 4405 alternate emission limit plan. [District Rule 4405] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.007 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.007 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306, and 4320] Federally Enforceable Through Title V Permit
18. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
37. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
38. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
42. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
45. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
47. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

49. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
50. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
51. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-30-28

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL/CASING GAS-FIRED STEAM GENERATOR (#33) (DIS# 45233-82) WITH O2 CONTROLLER, LOW-NOX BURNER AND FGR

PERMIT UNIT REQUIREMENTS

1. Steam generator shall only receive TEOR gas from TEOR permit S-1372-100, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
2. When complying with SOx emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
3. When complying with SOx emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
4. This equipment is approved to be operated at the following locations: Section 16, T31S/R22E; and NW/4 Section 06, T30S/R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
6. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
7. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu (as NO2), 0.014 lb-PM10/MMBtu, 138 ppmvd CO @ 3% O2, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. SOx (as SO2) emissions shall not exceed 97.9 lb/day except as provided below in condition #10. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Compliance with gas fired sulfur compound (SO₂) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
12. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
18. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
31. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
40. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
43. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

44. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-31-28

EXPIRATION DATE: 05/31/2021

SECTION: V **TOWNSHIP:** V **RANGE:** V

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/CASING GAS/TANK VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#34)
(DIS# 45234-82) EQUIPPED WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
4. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. This equipment is approved to be operated at the following locations: NE Section 16, T31S/R22E; and SW Section 10, T29S/R21E. [District Rule 2201] Federally Enforceable Through Title V Permit
8. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
9. SO_x (as SO₂) emissions shall not exceed 97.9 lb/day except as provided below. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions shall not exceed any of the following: 27 lb NO_x/day, 4,380 lb NO_x/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
14. Except during startup and shutdown emissions shall not exceed any of the following: PM₁₀: 0.014 lb/MMBtu; NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmvd @ 3.00% O₂; VOC: 0.003 lb/MMBtu; or CO: 138 ppmvd @ 3.00% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

15. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-316 so that at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
16. Compliance with 95% by weight sulfur removal efficiency requirement shall be conducted annually. [District Rule 4320] Federally Enforceable Through Title V Permit
17. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
35. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
36. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
45. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Permittee shall maintain records of volume of fuel gas burned and waste gas incinerated, fuel gas and waste gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
48. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

49. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
50. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-32-27

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#35) (DIS# 45235-82) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. Steam generator shall only receive TEOR gas from TEOR permit S-1372-100, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
2. When complying with SOx emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
3. When complying with SOx emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. This permit unit is authorized to operate at the following locations: Section 16, T31S, R22E (Bremer Fee Lease) and NW/4 Section 6, T30S, R22E (McKittrick Front Lease). [District Rule 2201] Federally Enforceable Through Title V Permit
5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
6. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
7. SOx (as SO2) emissions shall not exceed 97.9 lb/day except as provided below in condition #5. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions shall not exceed any of the following: PM10: 0.014 lb/MMBtu; NOx (as NO2): 0.008 lb/MMBtu or 7 ppmvd @ 3.00% O2; VOC: 0.003 lb/MMBtu; or CO: 138 ppmvd @ 3.00% O2. [District Rule 2201 and District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Compliance with gas fired sulfur compound (SO2) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
27. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
29. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
30. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
39. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
40. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
42. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-33-28

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#36) (DIS# 45236-82) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This permit unit is authorized to operate at the following locations: NW/4 Section 16, T31S, R22E (Bremer Fee Lease) and SW/4 Section 06, T30S, R22E (McFront Lease). [District Rule 2201] Federally Enforceable Through Title V Permit
2. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
3. When located at SW/4 Section 06, T30S, R22E (McFront Lease), this unit shall be fired on PUC quality natural gas only. [District Rule 2080] Federally Enforceable Through Title V Permit
4. When located at NW/4 Section 16, T31S, R22E, SO_x (as SO₂) emissions shall not exceed 97.9 lb/day except as provided in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
5. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Steam generator shall only receive TEOR gas from TEOR permit S-1372-100, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
7. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following: PM₁₀: 0.014 lb/MMBtu; NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmv @ 3 % O₂; VOC: 0.003 lb/MMBtu; or CO: 138 ppmv @ 3% O₂. [District Rule 2201 and District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
37. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-34-28

EXPIRATION DATE: 05/31/2021

SECTION: NW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#37) (DIS# 45237-82) WITH O2 CONTROLLER, LOW NOX BURNER, AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. This permit unit is authorized to operate at the following locations: NW/4 Section 16, T31S, R22E (Bremer Fee Lease), NW/4 Section 23, T31S, R22E (Dome Fee Lease), NE/4, Section 8, T30S, R22E (Morris Lease), and NE Section 6, T30S, R22E (McKittrick Unit). [District Rule 2201] Federally Enforceable Through Title V Permit
3. When located at NW/4 Section 23, T31S, R22E and NE/4, Section 8, T30S, R22E this unit shall be fired on PUC quality natural gas only. [District Rule 2201] Federally Enforceable Through Title V Permit
4. When located at NW/4 Section 16, T31S, R22E, compliance with gas fired sulfur compound (SO₂) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
5. When located at NW/4 Section 16, T31S, R22E, compliance with SO_x (as SO₂) emission limits shall be demonstrated by record keeping of casing gas flowrate and H₂S concentration and multiplying H₂S lb/day x 1.88 to get SO₂ lb/day from stack after incineration. [District Rule 2201] Federally Enforceable Through Title V Permit
6. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall measure and record, at least monthly, the sulfur content and BTU content of the casing gas incinerated in this unit. [District Rule 4406, 4.0] Federally Enforceable Through Title V Permit
8. If continuous operation oxygen analyzer/controller is utilized, excess O₂ shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, -17, -18, -19, and -20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Sulfur content of combusted gas shall not exceed 1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.014 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.018 lb-NO_x/MMBtu, 0.014 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
14. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
44. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406] Federally Enforceable Through Title V Permit
47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-74-21

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

WELL VENT VAPOR COLLECTION AND CONTROL SYSTEM, SHARED WITH VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-370, INCLUDING A 12.8 MMBTU/HR KALDAIR FLARE, 20 MMBTU/HR JOHN ZINK STANDBY FLARE, SEPARATOR(S), HEAT EXCHANGER, ONE SULFUR REMOVAL SYSTEM, KNOCKOUT DRUM(S), VAPOR RECOVERY SKID (VAPOR B), THREE PHASE SEPARATORS, COMPRESSORS, HEAT EXCHANGERS, PUMPS, AND PIPING TO THE BREMER LEASE TEOR VAPOR CONTROL SYSTEM S-1372-77 (E&M LEASE)

PERMIT UNIT REQUIREMENTS

1. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of S-1372-74's TEOR gas shall be tested not less than quarterly. If compliance with the 10% VOC content limit has been demonstrated for 8 consecutive quarters, then the testing frequency shall be annually. If an annual source test fails to show compliance, quarterly testing shall resume [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. John Zink and Kaldair flares shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rules 2520, 9.4.2 and 4311] Federally Enforceable Through Title V Permit
4. John Zink and Kaldair flares in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. Maximum amount of gas combusted in 20 MMBtu/hr John Zink standby flare shall not exceed 295 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Maximum amount of gas combusted in 20 MMBtu/hr John Zink standby flare shall not exceed 22,500 MMBtu/yr. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
7. If the flare exceeds the annual throughput threshold of 25,000 MMBtu/year for two consecutive calendar years, the operator shall notify the APCO in writing of the exceedance within 30 days following the end of the second calendar year. By April 15 of the year after the end of the second consecutive calendar year in which an exceedance of the annual throughput threshold in Table 2 occurred, the applicant shall submit an ATC application to modify or replace the flare to meet Table 3 emission limits. [District Rule 4311]
8. Emissions from 20.0 MMBtu/hr John Zink standby flare shall not exceed any of the following: NO_x (as NO₂): 0.068 lb/MMBtu; PM₁₀: 0.008 lb/MMBtu; CO: 0.102 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Maximum amount of sulfur contained in gas combusted by 20 MMBtu/hr John Zink standby flare shall not exceed 20,000 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall measure the sulfur content of the gas combusted in John Zink flare by District witnessed, or authorized, sample collection by ARB certified testing laboratory at startup and annually thereafter. [District Rules 1081, 7.2 and 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Higher heating value of gas combusted in John Zink flare shall be monitored at least quarterly. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. Emissions from 12.8 MMBtu/hr Kaldair flare shall not exceed any of the following: NO_x (as NO₂): 0.068 lb/MMBtu; SO_x: 8.9 lb/day; PM₁₀: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H₂S and Mercaptans. H₂S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Sulfur removal systems shall be used as needed to meet the emission limits of the John Zink flare, Kaldair flare, and steam generator S-1372-8. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Flares shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
17. Final vapor condenser shall utilize operational exhaust gas temperature indicator. [District Rule 1070 and District Rule 2201] Federally Enforceable Through Title V Permit
18. Mist eliminator shall be maintained in optimum operating condition. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Well vent vapors and vapors received from tank vapor control compressor S-1372-370 shall be combusted in Kaldair flare, John Zink flare, steam generator S-1372-8, piped to vapor control system S-1372-77 or TEOR operation S-1114-66. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Pilots shall be exclusively fired with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Permittee shall keep accurate daily records of amount of pilot fuel gas and TEOR noncondensable gas introduced to flare for incineration and shall make such records readily available for District inspection upon request. [District Rule 1070 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
22. Permittee shall maintain accurate records of well casing vapor H₂S concentration (periodic sampling of no less than once a quarter), daily volume of casing gas incinerated and calculated SO_x emissions to demonstrate compliance with SO_x limit. [District Rule 1070]
23. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
24. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
25. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
26. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
27. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
28. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
30. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
31. The operator shall monitor the vent gas flow to the flare with a flow-measuring device or other parameters as specified in this permit. The operator shall determine the heating value (Btu per cubic foot) of the vent gas annually in accordance with Section 6.3.6. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of exceeding the annual throughput thresholds in Table 2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311]
32. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
33. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit
34. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit
35. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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36. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
37. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
38. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
39. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
40. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
41. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
42. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
43. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
44. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
45. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
46. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
47. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit

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48. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
49. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
50. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit
51. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
52. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit
53. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit
54. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
55. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
56. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
57. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
58. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit

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59. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
60. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
61. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
62. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
63. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
64. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
65. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
66. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
67. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
68. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
69. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
70. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
71. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
72. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

73. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
74. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
75. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
76. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
77. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
78. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
79. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
80. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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81. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
82. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rule 108.1 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
83. {1294} The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
84. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
85. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
86. Permittee shall keep accurate records of daily and annual heat input to John Zink flare in MMBtu/day and MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-76-24

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

TEOR OPERATION INCLUDING 162 STEAM ENHANCED WELLS, WELL VENT VAPOR COLLECTION SYSTEM, STANDBY FLARE, HEAT EXCHANGERS, SEPARATORS, COMPRESSORS, TANKS, & VAPOR PIPING TO UNITS S-1372-13, -16, & -24 (DOME/TUMBADOR LEASE)

PERMIT UNIT REQUIREMENTS

1. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of S-1372-76's TEOR gas shall be tested not less than quarterly. If compliance with the 10% VOC content limit has been demonstrated for 8 consecutive quarters, then the testing frequency shall be annually. If an annual source test fails to show compliance, quarterly testing shall resume [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. Operation shall include 20' tall standby flare, vapor piping to standby flare, vapor piping to 3 DOGGR (Division of Oil and Gas and Geothermal Resources) approved disposal wells, and vapor piping to District approved TEOR steam generators S-1372-13, -16, & -24 for incineration. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operation shall include sulfa check system, to be used when necessary to meet sulfur compounds limits of standby flare and steam generators S-1372-13, -16, & -24. [District Rule 2201] Federally Enforceable Through Title V Permit
5. TEOR vapors shall be disposed of in DOGGR approved disposal wells and/or shall be incinerated by a stand-by flare or steam generator S-1372-13, -16, & -24, or piped to TEOR operation S-1114-66. [District Rule 2201] Federally Enforceable Through Title V Permit
6. TEOR vapors shall be equally distributed to standby flare and steam generators S-1372-13, -16, & -24 when one or more of the steam generators is inoperative. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Total casing gas sulfur oxide (SOx as SO2) emissions shall not exceed 1193.52 lb/day for the following steam generators and standby flare: S-1372-13 (#16), S-1372-16 (#12), S-1372-24 (#20), and S-1372-76. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Final vapor condenser shall be equipped with operational exhaust gas temperature indicator. [District Rule 1070 and District Rule 2201] Federally Enforceable Through Title V Permit
9. Mist eliminator shall be maintained and operated according to manufacturer's recommendation. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Standby flare shall be used to incinerate TEOR vapors only when at least one of three steam generators S-1372-13, -16 & -24 is inoperative and remaining steam generators are fired on PUC quality natural gas, or as allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Standby flare shall be designed for smokeless operation, with no visible emissions in excess of 5% opacity. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Permittee shall maintain accurate records of well casing vapor H₂S concentration (periodic sampling of no less than once per quarter), daily volume of casing vapor incinerated, and calculated daily SO₂ emissions. [District Rule 1070 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. Permittee shall maintain with the permit a copy of DOGGR approval, and a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1070 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
18. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
19. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311] Federally Enforceable Through Title V Permit
20. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311] Federally Enforceable Through Title V Permit
21. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311] Federally Enforceable Through Title V Permit
22. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311] Federally Enforceable Through Title V Permit
23. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311] Federally Enforceable Through Title V Permit
24. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
25. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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26. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311] Federally Enforceable Through Title V Permit
27. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311] Federally Enforceable Through Title V Permit
28. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311] Federally Enforceable Through Title V Permit
29. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311] Federally Enforceable Through Title V Permit
30. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311] Federally Enforceable Through Title V Permit
31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
32. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
33. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
34. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs. [District Rule 4401] Federally Enforceable Through Title V Permit

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35. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. [District Rule 4401] Federally Enforceable Through Title V Permit
36. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
37. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401 ; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
38. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
39. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
40. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
41. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit

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42. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
43. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
44. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
45. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
46. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
47. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
48. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
49. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
50. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
51. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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52. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401 (6/15/2023), or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
53. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
54. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
55. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
56. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
57. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
58. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (6/15/2023). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
59. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
60. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit

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61. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
62. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
63. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
64. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
65. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
66. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
67. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit

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68. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
69. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401 (6/15/2023), Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
70. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
71. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
72. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
73. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
74. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
75. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
76. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
77. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rule 108.1 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
78. {1294} The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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79. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
80. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
81. Permittee shall maintain a written record of VOC content of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
82. All records shall be maintained and retained on-site for a period of at least five (5) years. Records shall be made available to the APCO, California Air Resources Board (ARB), and EPA upon request. [District Rules 1070, 2201, 4401] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-77-28

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

TEOR OPERATION WELL VENT VAPOR COLLECTION SYSTEM WITH 450 STEAM DRIVE WELLS, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, SULFUR REMOVAL SYSTEM, COMPRESSORS, VAPOR PIPING TO STEAM GENERATORS, 33.3 MMBTU/HR STANDBY FLARE, AND PIPING FROM THE E&M LEASE TEOR VAPOR CONTROL SYSTEM S-1372-74 (BREMER LEASE)

PERMIT UNIT REQUIREMENTS

1. Standby flare shall be equipped with automatically lit pilot and waste gas shutoff upon flame failure. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Standby flare shall only be used to incinerate TEOR vapors when steam generator S-1372-17, S-1372-18, S-1372-19, or S-1372-20 are inoperable. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Emission rates from flare shall not exceed the following: PM10: 0.026 lb/MMBtu, NOx (as NO2): 0.068 lb/MMBtu, VOC: 0.063 lb/MMBtu, SOx (as SO2): 221.8 lb/day, and CO: 0.37 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Sulfur oxide (SOx as SO2) emissions shall not exceed 80,957 lb/yr from the flare. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Maximum amount of gas combusted in the flare shall not exceed 800 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H2S and Mercaptans. H2S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081] Federally Enforceable Through Title V Permit
7. Higher heating value of gas combusted in the flare shall be monitored at least quarterly. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
8. Measured heating value and quantity of gas flared shall be used to determine compliance with daily heat input limit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rules 2520, 9.4.2 and 4311] Federally Enforceable Through Title V Permit
10. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
12. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
14. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
15. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
16. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
17. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
18. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
19. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
20. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit
21. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit

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22. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
23. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
24. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
25. Operator shall monitor vent gas composition using one of the five methods pursuant to Section 6.6.1 through Section 6.6.5, as appropriate. [District Rule 4311, 6.6] Federally Enforceable Through Title V Permit
26. Operator shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] Federally Enforceable Through Title V Permit
27. All of the general monitoring provisions of Section 6.9, as applicable, shall be met. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
28. Operator shall install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than one frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. In lieu of video monitoring the operator may use an alternative monitoring method that provides data to verify date, time, vent gas flow, and duration of flaring events. [District Rule 4311, 6.10] Federally Enforceable Through Title V Permit
29. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
30. The following test method shall be used for TEOR gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520] Federally Enforceable Through Title V Permit
31. Operation shall include sulfur removal system, to be used when necessary to meet sulfur compounds limits of TEOR steam generators S-1372-17, S-1372-18, S-1372-19, S-1372-20, and flare (S-1372-77). [District Rule 2201] Federally Enforceable Through Title V Permit
32. When purchasing steam from Midway Sunset Cogeneration, an equivalent number of permittee's Bremer Lease generators shall be shutdown unless otherwise approved by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
33. If vapor combustion sources are inoperative, well vent vapors shall not be vented to the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

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34. Noncondensable vapors from this well vent vapor control system shall be incinerated in steam generators S-1372-17, S-1372-18, S-1372-19, S-1372-20, or in flare (S-1372-77) or injected into DOGGR-approved gas disposal wells and/or piped to TEOR operation S-1114-66. [District Rule 2201] Federally Enforceable Through Title V Permit
35. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
36. VOC content of S-1372-77's TEOR gas shall be tested not less than quarterly. If compliance with the 10% VOC content limit has been demonstrated for 8 consecutive quarters, then the testing frequency shall be annually. If an annual source test fails to show compliance, quarterly testing shall resume [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
38. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
39. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs . [District Rule 4401] Federally Enforceable Through Title V Permit
40. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. [District Rule 4401]
41. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

42. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
43. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
44. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
45. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
46. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit
47. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

48. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
49. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
50. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
51. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401]
52. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
53. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
54. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
55. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
56. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
57. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
58. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit

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59. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
60. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
61. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
62. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
63. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
64. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
65. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
66. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
67. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401 (6/15/2023). The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
68. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
69. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit

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70. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
71. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
72. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
73. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
74. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
75. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
76. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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77. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
78. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
79. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401, Section 4.6 (6/15/2023) (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
80. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
81. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
82. Permittee shall maintain accurate records of well casing vapor H₂S concentration at sulfur scrubber outlet (periodic sampling of no less than once per quarter). [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
83. Permittee shall maintain accurate records of daily and annual volumes of casing vapors incinerated in flare. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

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84. Permittee shall maintain with the permit a current listing of all steam enhanced wells with casing vents connected to the well vent collection and control system. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
85. Permittee shall maintain a written record of VOC content of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
86. {1294} The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
87. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
88. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
89. Permittee shall keep accurate records of daily heat input to standby flare in MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
90. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4401] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-87-21

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

TEOR OPERATION WITH WELL CASING COLLECTION SYSTEM WITH VAPOR PIPING TO UNITS S-1372-100, SERVING 98 STEAM ENHANCED WELLS, WELL COLLECTION PIPING, FLARE, NONCONDENSIBLE VAPOR PIPING TO FLARE, SULFA CHECK UNIT, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, COMPRESSORS, LUBE OIL TANKS, AND PUMPS (WELPORT LEASE)

PERMIT UNIT REQUIREMENTS

1. Condensate shall be disposed of in a manner preventing VOC emissions to the atmosphere. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
2. Total fugitive volatile organic compound (VOC) emission rate shall not exceed 60.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Compliance with sulfur emission limit shall be verified by daily fuel consumption and quarterly fuel sulfur content, and such records shall be available for District inspection for five years. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. Compliance with all other emission limits shall be verified by daily fuel consumption and operational data, and such records shall be available for District inspection for five years. [District Rule 1070 and 2520] Federally Enforceable Through Title V Permit
5. Permittee shall maintain with the permit a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1070 and 2520] Federally Enforceable Through Title V Permit
6. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520] Federally Enforceable Through Title V Permit
8. Well vent casing gases shall vent only to flare or the vapor control system listed on permit S-1372-100. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Flare shall operate with no visible emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Flare pilot shall fire continuously. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Flare shall be equipped with automatic pilot. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Flare shall only use PUC quality natural gas as auxiliary fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Sulfur oxide (SO_x) emission rate from the incineration of non-condensable vapor recovery gases in flare shall not exceed 274.56 lb/day as SO₂. [District Rule 2201] Federally Enforceable Through Title V Permit

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14. Total gas flow rate to flare shall not exceed 361,000 acf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Emissions from the flare shall not exceed any of the following: NO_x 0.068 lb/MMBtu, CO 0.310 lb/MMBtu, PM₁₀ 0.026 lb/MMBtu and VOC 0.032 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520] Federally Enforceable Through Title V Permit
17. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520] Federally Enforceable Through Title V Permit
18. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
19. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
20. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311] Federally Enforceable Through Title V Permit
21. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311] Federally Enforceable Through Title V Permit
22. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311] Federally Enforceable Through Title V Permit
23. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311] Federally Enforceable Through Title V Permit
24. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311] Federally Enforceable Through Title V Permit
25. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
26. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311] Federally Enforceable Through Title V Permit
27. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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28. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311] Federally Enforceable Through Title V Permit
29. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311] Federally Enforceable Through Title V Permit
30. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311] Federally Enforceable Through Title V Permit
31. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311] Federally Enforceable Through Title V Permit
32. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
33. The requirements of District Rule 4401 (6/15/2023) shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
34. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
35. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

36. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401 (6/15/2023). The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
37. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401 (6/15/2023); 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
38. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
39. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
40. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
41. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

42. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 (6/15/2023) shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
43. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 (6/15/2023) shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
44. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
45. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
46. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
47. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
48. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
49. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
50. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
51. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

52. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401 (6/15/2023), or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
53. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit
54. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
55. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
56. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
57. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
58. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
59. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
60. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
61. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
62. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401 (6/15/2023). The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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63. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401 (6/15/2023). The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
64. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
65. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
66. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
67. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
68. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
69. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
70. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit

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71. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
72. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
73. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
74. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401 (6/15/2023), Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
75. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
76. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
77. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(as amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

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78. {1294} The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
79. The concentration of sulfur compounds in the exhaust from combustion equipment shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520] Federally Enforceable Through Title V Permit
80. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
81. Permittee shall maintain daily and annual records of volume of gas flared. [District Rule 2201] Federally Enforceable Through Title V Permit
82. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-99-13

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

TEOR OPERATION INCLUDING 132 STEAM ENHANCED WELLS, WELL VENT VAPOR RECOVERY SYSTEM AND VAPOR PIPING TO UNIT S-1372-100, SLUG CATCHER, SCRUBBERS, HEAT EXCHANGER, COMPRESSORS, PUMPS, STANDBY FLARE, SULFA CHECK SYSTEM, & VAPOR PIPING TO UNIT S-1372-26 (MCKITTRICK FEE/HOYT LEASE)

PERMIT UNIT REQUIREMENTS

1. Collected condensate shall be discharged into production pipeline. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Liquids collected in drip pot on noncondensable piping going to steam generator S-1372-26 shall be returned to condensate collection vessel. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Standby flare shall only be used to incinerate TEOR vapors when steam generator S-1372-26 is inoperative. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Noncondensable vapors from this well vent vapor control system shall be incinerated in steam generator S-1372-26 or standby flare. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC emissions from vapor collection and control system shall not exceed 93.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Sulfur compounds (as SO₂) emissions from incineration of TEOR vapors shall not exceed 2.56 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain accurate records of well casing vapor total sulfur concentration (periodic sampling of no less than once per quarter), daily volume of casing vapor incinerated, and calculated daily SO₂ emissions. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain with the permit a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Compliance with sulfur emission limit shall be verified by daily fuel consumption and quarterly fuel sulfur content, and such records shall be available for District inspection for five years. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
14. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
15. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
16. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
17. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
18. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
19. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
20. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
21. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
22. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit
23. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit

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24. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
25. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
26. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
27. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
28. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
29. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
30. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
31. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

32. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
33. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
34. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
35. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
36. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit
37. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

38. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
39. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
40. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
41. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
42. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
43. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
44. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
45. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
46. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
47. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
48. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit

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49. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
50. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
51. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
52. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
53. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
54. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
55. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
56. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
57. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
58. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
59. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit

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60. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
61. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
62. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
63. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
64. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
65. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
66. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit

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67. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
68. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
69. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401 (6/15/2023), Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
70. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
71. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
72. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rule 108.1 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
73. {1294} The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

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74. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
75. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
76. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4401] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-100-42

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

TEOR OPERATION WITH WELL CASING COLLECTION SYSTEM WITH VAPOR PIPING TO UNIT S-1372-99 SERVING 933 STEAM ENHANCED WELLS WITH 3-PHASE SEPARATORS, STANDBY FLARE, SLUG CATCHER, SCRUBBERS, HEAT EXCHANGERS, COMPRESSORS, PUMPS, SULFA CHECK AND LIQUID SULFUR REMOVAL SYSTEMS (GAMBLE/MCKITTRICK FRONT)

PERMIT UNIT REQUIREMENTS

1. Well vent vapor collection system shall be equipped with backflow device(s) to ensure vapors from other permits' vapor piping does not comeingle with 100's well vent vapor collection system vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of S-1372-100's TEOR gas shall be tested not less than quarterly. If compliance with the 10% VOC content limit has been demonstrated for 8 consecutive quarters, then the testing frequency shall be annually. If an annual source test fails to show compliance, quarterly testing shall resume [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. Permittee shall maintain a written record of VOC content of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operation shall include the following equipment: 933 steam enhanced wells, well vent vapor collection system, standby flare, slug catchers, heat exchangers, compressors, pumps, vapor piping, dry fuel gas sulfur scrubbing system and liquid sulfur removal systems, tanks and 3-phase separators. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operation shall include vapor piping from tanks S-1372-128, '-209, '-220, '-323, '-405, '-412, and S-1641-34, '-35, '-36, and '-37 to vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. At least one sulfur removal system shall be operated at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
8. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with liquid sulfur removal system. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Collected condensate shall be discharged into production pipeline. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Flare S-1372-100 shall only be used to incinerate TEOR vapors when one or more of steam generators S-1372-1, -2, -4, -16, -127, and -317 are not in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Flare shall only use PUC quality natural gas as auxiliary fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Flare shall be designed for smokeless operation, with no visible emissions in excess of 5% opacity. [District Rule 2201] Federally Enforceable Through Title V Permit

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13. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520] Federally Enforceable Through Title V Permit
14. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520] Federally Enforceable Through Title V Permit
15. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
16. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
17. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311] Federally Enforceable Through Title V Permit
18. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311] Federally Enforceable Through Title V Permit
19. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311] Federally Enforceable Through Title V Permit
20. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311] Federally Enforceable Through Title V Permit
21. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311] Federally Enforceable Through Title V Permit
22. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
23. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311] Federally Enforceable Through Title V Permit
24. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311] Federally Enforceable Through Title V Permit

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25. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311] Federally Enforceable Through Title V Permit
26. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311] Federally Enforceable Through Title V Permit
27. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311] Federally Enforceable Through Title V Permit
28. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311] Federally Enforceable Through Title V Permit
29. Operator shall monitor vent gas composition using one of the five methods pursuant to Section 6.6.1 through Section 6.6.5, as appropriate. [District Rule 4311] Federally Enforceable Through Title V Permit
30. Operator shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311] Federally Enforceable Through Title V Permit
31. All of the general monitoring provisions of Section 6.9, as applicable, shall be met. [District Rule 4311] Federally Enforceable Through Title V Permit
32. Operator shall install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than one frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. In lieu of video monitoring the operator may use an alternative monitoring method that provides data to verify date, time, vent gas flow, and duration of flaring events. [District Rule 4311] Federally Enforceable Through Title V Permit
33. Vapors from this well vent vapor control system shall be incinerated in steam generators S-1372-1, -2, -4, -30, -32, -33, -127, -317, -334 or standby flare and/or injected into DOGGR approved gas injection wells. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Total sulfur oxide (SO_x as SO₂) emissions shall not exceed 1075.2 lb/day for the following steam generators: S-1372-1, -2, -4, -127, -317, and standby flare. [District Rule 2201] Federally Enforceable Through Title V Permit

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35. Fugitive emissions from vapor collection and control system shall not exceed 239.6 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
36. There shall be no more than 30 gas leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Permittee shall maintain accurate records of well casing vapor H₂S concentration (periodic sampling of no less than once per month), daily volume of casing vapor incinerated, and calculated daily SO₂ emissions from S-1372-1, '-2, and '-4. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
38. Permittee shall maintain with the permit a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
39. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit
40. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520] Federally Enforceable Through Title V Permit
41. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
42. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
43. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
44. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
45. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
46. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401 (6/15/2023). The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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47. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
48. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
49. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
50. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
51. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit
52. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit

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53. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
54. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
55. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
56. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
57. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
58. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
59. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
60. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
61. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
62. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
63. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit

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64. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
65. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
66. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
67. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
68. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
69. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
70. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
71. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
72. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
73. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
74. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit

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75. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
76. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
77. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
78. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
79. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
80. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
81. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit

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82. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
83. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
84. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401 (6/15/2023), Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
85. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
86. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
87. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

88. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520] Federally Enforceable Through Title V Permit
89. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
90. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4401] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-111-20

EXPIRATION DATE: 05/31/2021

SECTION: SW22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL/WASTE GAS-FIRED STEAM GENERATOR (#46) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FGR

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
8. Steam generators S-1372-1 and '-111 shall not be located simultaneously at any of the following locations: Sec. 22, T32S, R23E; NE/4 & SE/4 Sec. 21, T32S, R23E; NW/4 & NE/4 Sec. 27, T32S, R23E; and NE/4 Sec. 28, T32S, R23E. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
12. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. Steam generator shall be fired on gaseous fuel treated to remove 95% by weight of sulfur compounds; or treated such that the sulfur content of all fuel streams combined does not exceed 1 gr of sulfur compounds (as S) per 100 dscf, which meets the most stringent emission requirements of BACT. [District Rule 2201]
14. SO_x (as SO₂) emissions shall not exceed 95.5 lb/day (22.3 gr S/100 scf) except as provided in the condition below. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Oxides of sulfur emissions shall not exceed 1578.1 lb/day as SO₂ from the following steam generators: S-1372-8, '17, '18, '19, '20, '-111 and standby flare S-1372-312. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Except during startup and shutdown emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 138 ppmvd CO @ 3% O₂ or 0.102 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4301, 4305, 4306, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
17. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
35. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
36. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
45. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. Permittee shall submit notification to the District of the date of construction, anticipated startup, and actual startup. Notifications shall be postmarked no later than 30 days after construction and 15 days after actual startup. The notifications shall include the design heat input and identification of fuels for this permit unit. [40 CFR 60.48c (a)]
49. If the unit's actual emissions exceed 4,161 lb NO_x and 1,560 lb VOCs per calendar year the permittee must report to the District the annual NO_x and VOC emissions as calculated pursuant to paragraph 40 CFR 51.165(a)(6)(iii) and any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection. Such information must be submitted to the District for a period of 5 calendar years beginning the year of operation under ATC S-1372-111 and shall be submitted within 60 days of the end of each calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
50. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
51. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)]
52. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
53. {1670} This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
54. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-112-19

EXPIRATION DATE: 05/31/2021

SECTION: NW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#45 GAMBLE) WITH NORTH AMERICAN 4231-GLE ULTRA-LOW NOX BURNER, O2 CONTROLLER, AND FGR

PERMIT UNIT REQUIREMENTS

1. Steam generator shall be equipped with operational fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas fuel sulfur content shall not exceed 1.0 grains-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Emission rates shall not exceed: NOx (as NO2): 7 ppmvd @ 3% O2 or 0.0085 lb/MMBtu; or CO: 30 ppmvd @ 3% O2 or 0.022 lb/MMBtu. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: PM10: 0.005 lb/MMBtu; or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Emission rates during startup and shutdown shall not exceed: NOx - 15 ppmv @ 3% O2 or 0.018 lb/MMBtu; CO 400 ppmv @ 3% O2 or 0.296 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Emissions rate of NOx shall not exceed 15.8 lb/day nor 4,654 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions rate of CO shall not exceed 97.8 lb/day nor 12,045 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
11. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
29. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
38. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
40. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
41. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. {1670} This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-113-16

EXPIRATION DATE: 05/31/2021

SECTION: NW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#44) WITH NORTH AMERICAN GLE LOW NOX BURNER, O2 CONTROLLER AND FGR

PERMIT UNIT REQUIREMENTS

1. Steam generator shall be equipped with operational fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA test methods. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
8. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
23. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
27. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
35. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
38. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. {1670} This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-114-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL SUMP REPLACEMENT TANK WITH PV RELIEF VALVE AND ASSOCIATED VALVES, FLANGES, PUMPS, AND PIPING

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-115-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL SUMP REPLACEMENT TANK WITH PV RELIEF VALVE AND ASSOCIATED VALVES, FLANGES, PUMPS, AND PIPING

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-116-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL SUMP REPLACEMENT TANK WITH PV RELIEF VALVE AND WITH ASSOCIATED VALVES, FLANGES, PUMPS, AND PIPING

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-117-4

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF SUMP REPLACEMENT TANK WITH WITH PV RELIEF VALVE AND ASSOCIATED VALVES, FLANGES, PUMPS AND PIPING

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
31. Pursuant to 40 CFR 60.110(a), since this tank is less than 40,000 gallons in capacity, Subpart K is not applicable to this tank. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-127-29

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR #43 EQUIPPED WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE LOW NOX BURNER, FGR, O2 CONTROLLER, AND EXHAUST GAS SOX SCRUBBER/ESP SHARED WITH S-1372-317 (MCKITTRICK FRONT LEASE)

PERMIT UNIT REQUIREMENTS

1. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
2. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained for each fuel line. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
3. Exhaust from unit shall be directed only to SO2 scrubber/wet ESP authorized herein except when burning PUC quality natural gas exclusively. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Scrubber/wet ESP shall be in operation when combusting TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapors from TEOR operation, permit # S-1372-100 may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.324 lb-SOx/MMBtu, 0.008 lb-PM10/MMBtu, 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.324 lb-SOx/MMBtu, 0.008 lb-PM10/MMBtu, 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306 and 4320] Federally Enforceable Through Title V Permit
9. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Total sulfur oxide (SOx as SO₂) emissions shall not exceed 1,075.2 lb/day from steam generators S-1372-1, '2, '4, '127, '317, and flare '100. [District Rule 2201] Federally Enforceable Through Title V Permit
12. All vapor recovery gas burned in this device shall first be treated by the scrubber/wet ESP so at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
13. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
14. The SOx emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO₂, inlet" is equal to the concentration of SOx (expressed as SO₂) at the inlet side of the SOx emission control system (in lb/dscf) and "CSO₂, outlet" is equal to the concentration of SOx (expressed as SO₂) at the outlet side of the SOx emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
15. The total gas fired in this unit, on a monthly average, shall be less than 50% PUC quality natural gas, by volume. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet and no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet. PUC quality natural gas also means high methane gas of at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
16. The permittee shall maintain monthly records of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit
17. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Scrubber liquor pH shall be maintained within the range demonstrated to achieve compliance with SO₂ emissions limit and control efficiency performance, and shall be continuously monitored. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Scrubber mist eliminator shall be properly cleaned and maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
20. The wet ESP's secondary DC voltage shall be monitored weekly to ensure it is operating between 35 to 50KV [District Rule 2201] Federally Enforceable Through Title V Permit
21. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than that demonstrated to achieve compliance during source testing. [District Rule 2201] Federally Enforceable Through Title V Permit
22. When any unit connected to scrubber/wet ESP is burning TEOR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter unless no TEOR gas has been burned since the last scrubber performance source test. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least quarterly. [District Rule 2201] Federally Enforceable Through Title V Permit
23. When unit is operated without scrubber/wet ESP, permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content within 60 days of initiating operation without scrubber. Analyses, as approved by the APCO, provided by the gas supplier may be used to satisfy this requirement. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Methods 6, 6B, 8, or ARB 100. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
35. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
38. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
40. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
41. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
42. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
43. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
44. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
45. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
46. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
48. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
49. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
50. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
51. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
52. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
53. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
54. Permittee shall maintain records of the wet ESP's secondary DC voltage and shall be made readily available for District inspection upon request [District Rule 2201] Federally Enforceable Through Title V Permit
55. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
56. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
57. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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58. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
59. {1670} This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
60. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-128-9

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,500 BBL WASH TANK (#80) AND TWO FREE WATER KNOCKOUT VESSELS WITH VAPOR RECOVERY SYSTEM SHARED WITH PERMIT UNITS S-1372-129, 130, 131, 132, AND 135 (UNIT LEASE)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 (6/15/2023) or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
2. The vapor recovery system shall include the following operational equipment: pressure/vacuum relief valves, piping to pressure relief valve at vapor collection manifold, one air cooled heat exchanger, one vapor recovery compressor, one compressor discharge gas/liquid separator, one condensate pump, and vapor piping to TEOR vapor control system S-1372-100. [District Rule 2201] Federally Enforceable Through Title V Permit
3. {981} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The API gravity of an organic liquid stored in this tank shall be less than 26 degrees. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Pressure/vacuum relief valves shall be set to open at 2 oz./square inch pressure and 0.5 oz./square inch vacuum. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Vapor compressor shall activate whenever tank internal pressure exceeds 2 oz./square inch. [District Rule 2201] Federally Enforceable Through Title V Permit
10. There shall be no truck loading or unloading at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Liquids from gas/liquid separators shall be pumped back to tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The total VOC emissions from the controlled vapor displacement and components connecting vapor control piping between the tank and the main vapor control trunk line shall be less than 0.5 pounds per day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
15. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
18. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623 (6/15/2023). [District Rule 4623] Federally Enforceable Through Title V Permit
20. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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22. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
24. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
25. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
29. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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30. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
31. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623]
33. The efficiency of any VOC destruction device shall be measured using EPA Method 18, 25, 25A, or 25B (as appropriate). [District Rule 4623] Federally Enforceable Through Title V Permit
34. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
35. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520] Federally Enforceable Through Title V Permit
36. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201, 2520, and 4623] Federally Enforceable Through Title V Permit
37. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
38. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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39. The permittee shall maintain records sufficient to demonstrate compliance with the daily emission limit. These records shall contain calculated emission quantity as well as each process variable used in the respective calculations. [District Rules 2201 and 2520] Federally Enforceable Through Title V Permit
40. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from a common source. [District Rule 2520] Federally Enforceable Through Title V Permit
41. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
42. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of Rule 4801 (Amended 12/17/92) and 40 CFR Part 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements [District Rule 2520] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-129-8

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL PRODUCTION TANK (#78) SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT UNIT S-1372-128

PERMIT UNIT REQUIREMENTS

1. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
4. Tank vapors shall be vented only to vapor control system listed on tank permit S-1372-128. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99 percent by weight as determined by the test method specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
6. {981} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank pressure relief valves shall not open unless the tank internal pressure exceeds 2.0 oz. or falls below 0.5 oz. vacuum. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Vapor compressor shall activate whenever tank internal pressure exceeds 2 oz./square inch. [District Rule 2201] Federally Enforceable Through Title V Permit
10. There shall be no truck loading or unloading at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Vapor collection system shall not discharge to atmosphere except during breakdown conditions pursuant to Rule 1100. [District Rule 1100] Federally Enforceable Through Title V Permit
12. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]
13. Liquids from gas/liquid separators shall be pumped back to tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
14. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623 (6/15/2023). [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
20. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
22. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere [District Rule 4623] Federally Enforceable Through Title V Permit
25. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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32. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
33. Operator shall conduct quarterly gas sampling of tank vapor space and vapor control system piping and components. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
34. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
35. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
36. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
37. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
38. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
39. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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40. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
41. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520] Federally Enforceable Through Title V Permit
42. The permittee shall keep accurate records of VOC content of vapors for a period of five (5) years and shall make such records available for District inspection upon requests. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-130-8

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL WATER DISPOSAL TANK (#79) WITH VAPOR RECOVERY SYSTEM SHARED WITH S-1372-128

PERMIT UNIT REQUIREMENTS

1. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid, tank may be disconnected from vapor control system and may be open. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be connected to vapor control system and is subject to normal leak free requirements. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Pressure/vacuum relief valves shall be set to open at 2 oz./square inch pressure and 0.5 oz./square inch vacuum. [District Rule 2201] Federally Enforceable Through Title V Permit
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The API gravity of an organic liquid stored in this tank shall be less than 26 degrees. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Vapor compressor shall activate whenever tank internal pressure exceeds 2 oz./square inch. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The total VOC emissions from the controlled vapor displacement and components connecting vapor control piping between the tank and the main vapor control trunk line shall be less than 0.5 pounds per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
14. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99 percent by weight as determined by the test method specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. {981} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
17. There shall be no truck loading or unloading at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Vapor collection system shall not discharge to atmosphere except during breakdown conditions pursuant to Rule 1100. [District Rule 1100] Federally Enforceable Through Title V Permit
19. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]
20. Liquids from gas/liquid separators shall be pumped back to tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
21. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520] Federally Enforceable Through Title V Permit
23. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
24. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623 (6/15/2023). [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
30. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere [District Rule 4623] Federally Enforceable Through Title V Permit
32. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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34. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
35. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
37. Operator shall conduct quarterly gas sampling of tank vapor space and vapor control system piping and components. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
38. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
39. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
40. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
41. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
42. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
43. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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44. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
45. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520] Federally Enforceable Through Title V Permit
46. The permittee shall keep accurate records of VOC content of vapors for a period of five (5) years and shall make such records available for District inspection upon requests. [District Rule 4623] Federally Enforceable Through Title V Permit
47. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. The permittee shall maintain records sufficient to demonstrate compliance with the daily emission limit. These records shall contain calculated emission quantity as well as each process variable used in the respective calculations. All records shall be retained on site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 2201, 2520, 9.3.2] Federally Enforceable Through Title V Permit
49. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from a common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
50. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of Rule 4801 (Amended 12/17/92) and 40 CFR Part 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-131-8

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL PRODUCTION TANK (#77) SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT UNIT S-1372-128

PERMIT UNIT REQUIREMENTS

1. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
4. Tank vapors shall be vented only to vapor control system listed on tank permit S-1372-128. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99 percent by weight as determined by the test method specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
6. {981} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank pressure relief valves shall not open unless the tank internal pressure exceeds 2.0 oz. or falls below 0.5 oz. vacuum. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Vapor compressor shall activate whenever tank internal pressure exceeds 2 oz./square inch. [District Rule 2201] Federally Enforceable Through Title V Permit
10. There shall be no truck loading or unloading at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Vapor collection system shall not discharge to atmosphere except during breakdown conditions pursuant to Rule 1100. [District Rule 1100] Federally Enforceable Through Title V Permit
12. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623]
13. Liquids from gas/liquid separators shall be pumped back to tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
14. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623 (6/15/2023). [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
20. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
22. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere [District Rule 4623] Federally Enforceable Through Title V Permit
25. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
33. Operator shall conduct quarterly gas sampling of tank vapor space and vapor control system piping and components. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
34. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
35. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
36. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
37. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
38. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
39. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

40. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
41. The permittee shall keep accurate records of VOC content of vapors for a period of five (5) years and shall make such records available for District inspection upon requests. [District Rule 4623] Federally Enforceable Through Title V Permit
42. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-132-6

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL REJECT TANK (#77) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-128

PERMIT UNIT REQUIREMENTS

1. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid, tank may be disconnected from vapor control system and may be open. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be connected to vapor control system and is subject to normal leak free requirements. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Pressure/vacuum relief valves shall be set to open at 2 oz./square inch pressure and 0.5 oz./square inch vacuum. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Vapor compressor shall activate whenever tank internal pressure exceeds 2 oz./square inch. [District Rule 2201] Federally Enforceable Through Title V Permit
8. True vapor pressure (TVP) of any liquid placed, stored or held in the tank shall not exceed 1.60 psia. [District Rule 2201] Federally Enforceable Through Title V Permit
9. There shall be no truck loading or unloading at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Facility piping system shall be routinely inspected for leaks and all leaks shall be promptly repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Vapor control system efficiency shall be maintained at no less than 99% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Vapor collection system shall not discharge to atmosphere except during breakdown conditions pursuant to Rule 1100. [District Rule 1100] Federally Enforceable Through Title V Permit
13. Liquids from gas/liquid separators shall be pumped back to tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Throughput shall not exceed 100 bbl per day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

15. VOC emission rate shall not exceed 0.01 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
16. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
17. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
18. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
19. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
20. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
21. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
22. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
23. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
24. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
26. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
27. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
29. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
30. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
31. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. Operator shall maintain monthly records of daily average throughput. [District Rule 2520] Federally Enforceable Through Title V Permit
33. {463} Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
34. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of Rule 4801 (Amended 12/17/92) and 40 CFR Part 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-139-13

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

10.0 MMBTU/HR NATURAL GAS/LPG FIRED HEATER TREATER #1 (#25118) WITH TWO 5 MMBTU/HR KVAERNER-ZINK LOW NOX FORCED DRAFT BURNERS AND FLUE GAS RECIRCULATION, FUEL INDUCED FLUE GAS RECIRCULATION, TWO STACKS AND PLC AUTOMATED CONTROLS

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. All fuel supply lines to this unit shall be permanently disconnected. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rules 4306 and 4320. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Emissions from the natural gas/LPG-fired unit shall not exceed either of the following limits: 30 ppmvd NO_x @ 3% O₂ or 0.036 lb-NO_x/MMBtu, and 150 ppmvd CO @ 3% O₂ or 0.11 lb-CO/MMBtu. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 4306, and 4320] Federally Enforceable Through Title V Permit
6. {525} When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. {537} If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. {558} If the unit is fired on non-certified liquid fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the liquid fuel being fired in the unit shall be determined using ASTM D 2880-71. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
11. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
12. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
13. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rule 108.1 (Kern) and 404 (Kern). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
17. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520 and 4801] Federally Enforceable Through Title V Permit
18. {1670} This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-142-8

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-77
WITH TWO PERMIT EXEMPT BURNERS (PEER-11)

PERMIT UNIT REQUIREMENTS

1. The heater treater shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This heater treater shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2080] Federally Enforceable Through Title V Permit
4. The VOC content of heater treater vapor recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this heater treater shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The heater treater shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Rule 4623 Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall conduct quarterly gas sampling for the heater treater to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-143-10

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-77 WITH TWO PERMIT EXEMPT BURNERS (PEER-12)

PERMIT UNIT REQUIREMENTS

1. The heater treater shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This heater treater shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2080] Federally Enforceable Through Title V Permit
4. The VOC content of heater treater vapor recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this heater treater shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The heater treater shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Rule 4623 Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall conduct quarterly gas sampling for the heater treater to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-144-10

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-77 WITH TWO PERMIT EXEMPT BURNERS (PEER-13)

PERMIT UNIT REQUIREMENTS

1. The heater treater shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This heater treater shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2080] Federally Enforceable Through Title V Permit
4. The VOC content of heater treater vapor recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this heater treater shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The heater treater shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Rule 4623 Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall conduct quarterly gas sampling for the heater treater to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-146-10

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

8 MMBTU/HR NATURAL GAS FIRED HEATER TREATER OPERATING AS AN UNFIRED FREE WATER KNOCKOUT (#2) (#10290)

PERMIT UNIT REQUIREMENTS

1. The fuel supply line shall be physically disconnected from this burner. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
2. This burner shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rules 4305 and 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. If continuous operation oxygen analyzer/controller is utilized, excess O₂ shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rule 108.1 (Kern)] Federally Enforceable Through Title V Permit
6. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. {525} When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
11. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rule 108.1 (Kern) and 404 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
13. {1677} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-186-11

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

GASOLINE DISPENSING OPERATION WITH ONE 10,000 GALLON FIREGUARD ABOVEGROUND STORAGE TANK SERVED BY OPW EVR PHASE I VAPOR RECOVERY SYSTEM (VR-401-C), STANDING LOSS CONTROL (VR-301-F), AND TWO FUELING POINTS WITH TWO GASOLINE DISPENSING NOZZLES SERVED BY BALANCE PHASE II VAPOR RECOVERY SYSTEM (G-70-162-A)

PERMIT UNIT REQUIREMENTS

1. The Phase I, Phase II, and Standing Loss Control Vapor recovery systems shall be installed and maintained in accordance with the manufacturer specifications and the ARB Executive Orders specified in this permit, including applicable rules and regulations of the Division of Measurement Standards of the Department of Food and Agriculture, the Office of the State Fire Marshal of the Department of Forestry and Fire Protection, the Division of Occupational Safety and Health of the Department of Industrial Relations, and the Division of Water Quality of the State Water Resources Control Board that have been made conditions of the certification. [District Rules 4621 and 4622 and CH&SC 41950] Federally Enforceable Through Title V Permit
2. This gasoline storage and dispensing equipment shall not be used in retail sales, where gasoline dispensed by the unit is subject to payment of California sales tax on gasoline sales. [District Rule 4622] Federally Enforceable Through Title V Permit
3. The storage container shall be installed, maintained, and operated such that it is leak-free. [District Rule 4621] Federally Enforceable Through Title V Permit
4. The Phase I and Phase II vapor recovery systems and gasoline dispensing equipment shall be maintained without leaks as determined in accordance with the test method specified in this permit. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
5. A leak is defined as the dripping of VOC-containing liquid at a rate of more than three (3) drops per minute, or the detection of any gaseous or vapor emissions with a concentration of total organic compound greater than 10,000 ppmv, as methane, above background when measured in accordance with EPA Test Method 21. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
6. No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo container, which attest to the vapor integrity of the container. [District Rule 4621] Federally Enforceable Through Title V Permit
7. No person shall operate any ARB certified Phase II vapor recovery system or any portion thereof that has a major defect or an equipment defect that is identified in any applicable ARB Executive Order until the following conditions have been met: 1) the defect has been repaired, replaced, or adjusted as necessary to correct the defect; 2) the District has been notified, and the District has reinspected the system or authorized the system for use (such authorization shall not include the authority to operate the equipment prior to the correction of the defective components); and 3) all major defects, after repair, are duly entered into the Operations and Maintenance (O&M) manual. [District Rule 4622] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon identification of any major defects, the permittee shall tag "Out-of-Order" all dispensing equipment for which vapor recovery has been impaired. Tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defective equipment has been repaired, replaced, or adjusted, as necessary. In the case of defects identified by the District, tagged equipment shall be rendered inoperable, and the tag shall not be removed until the District has been notified of the repairs, and the District has either reinspected the system or authorized the tagged equipment for use. [District Rule 4622] Federally Enforceable Through Title V Permit
9. The permittee shall implement a periodic maintenance inspection program for the certified Phase II vapor recovery system consistent with the requirements of this permit. The program shall be documented in an operation and maintenance (O&M) manual and shall at a minimum contain the following information: 1) copies of all vapor recovery performance tests; 2) all applicable ARB Executive Orders, Approval Letters, and District Permits; 3) the manufacturer's specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer; 4) system and/or component testing requirements, including test schedules and passing criteria for each of the standard tests required by this permit (the owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements), and 5) additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit conditions, including replacement schedules for failure or wear prone components. [District Rule 4622] Federally Enforceable Through Title V Permit
10. The permittee shall conduct periodic maintenance inspections based on the greatest monthly throughput of gasoline dispensed by the facility in the previous year as follows: A) less than 2,500 gallons - one day per month; B) 2,500 to less than 25,000 gallons - one day per week; or C) 25,000 gallons or greater - five days per week. All inspections shall be documented within the O & M Manual. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
11. Periodic maintenance inspections of the Phase I vapor recovery system shall include, at a minimum, verification that 1) the fill caps and vapor caps are not missing, damaged, or loose; 2) the fill cap gasket and vapor cap gaskets are not missing or damaged; 3) the fill adapter and vapor adapter are securely attached to the risers; 4) where applicable, the spring-loaded submerged fill tube seals properly against the coaxial tubing; 5) the dry break (poppet-valve) is not missing or damaged; and 6) the submerged fill tube is not missing or damaged. [District Rule 4621] Federally Enforceable Through Title V Permit
12. Periodic maintenance inspections of the Phase II vapor recovery system shall include, at a minimum, verification that 1) the following nozzle components are in place and in good condition as specified in ARB Executive Order as applicable: faceplate/facecone, bellows, latching device spring, vapor check valve, spout (proper diameter/vapor collection holes), insertion interlock mechanism, automatic shut-off mechanism, and hold open latch (unless prohibited by law or the local fire control authority); 2) the hoses are not torn, flattened or crimped; 3) the vapor path of the coaxial hoses associated with bellows equipped nozzles does not contain more than 100 ml of liquid if applicable; and 4) the vapor processing unit is functioning properly, for operations that are required to have or possess such a unit. [District Rule 4622] Federally Enforceable Through Title V Permit
13. In the event of a separation due to a drive off, the permittee shall, unless otherwise specified in the applicable ARB Executive Order, conduct a visual inspection of the affected equipment and either 1) perform qualified repairs on any damaged components and conduct applicable re-verification tests pursuant to the requirements of this permit, or 2) replace the affected nozzles, coaxial hoses, breakaway couplings, and any other damaged components with new or certified rebuilt components that are ARB certified. The activities shall be documented in accordance with the requirements of this permit before placing the affected equipment back in service. [District Rule 4622] Federally Enforceable Through Title V Permit
14. The gasoline throughput for this permit unit shall not exceed 1,314,000 gallons in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The permittee shall conduct all periodic vapor recovery system performance tests specified in this permit, no more than 30 days before or after the required compliance testing date, unless otherwise required under the applicable ARB Executive Order. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

16. The permittee shall perform and pass a Static Leak Test "Determination of Static Pressure Performance of Vapor Recovery Systems at Gasoline Dispensing Facilities with Aboveground Tanks" in accordance with the Executive Order specified in this permit for the Phase I Vapor Recovery System at least once every 12 months. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
17. For certified Phase II vapor recovery systems with liquid removal devices, the permittee shall perform and pass an ARB TP-201.6C Liquid Removal Test whenever the liquid in the vapor path exceeds 100 ml of liquid, or as required by the applicable ARB Executive Order. The amount of liquid in the vapor path shall be measured by lowering the gasoline dispensing nozzle into a container until such time that no more liquid drains from the nozzle. The amount of liquid drained into the container shall be measured using a graduated cylinder or graduated beaker. The vapor path shall be inspected according to the monitoring frequency as determined by monthly gasoline throughput. [District Rule 4622] Federally Enforceable Through Title V Permit
18. A person conducting testing of, or repairs to, a certified vapor recovery system shall be in compliance with District Rule 1177 (Gasoline Dispensing Facility Tester Certification). [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
19. A person performing installation of, or maintenance on, a certified Phase I or Phase II vapor recovery system shall be certified by the ICC for Vapor Recovery System Installation and Repair, or work under the direct and personal supervision of an individual physically present at the work site who is certified. The ICC certification shall be renewed every 24 months. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
20. Proof of the ICC certification and all other certifications required by the Executive Order and installation and operation manual shall be made available onsite. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
21. The permittee shall notify the District at least 7 days prior to each performance test. The test results shall be submitted to the District no later than 30 days after the completion of each test. [District Rule 4621] Federally Enforceable Through Title V Permit
22. The permittee shall maintain a copy of all test results. The test results shall be dated and shall contain the name, address, and telephone number of the company responsible for system installation and testing. [District Rule 4622] Federally Enforceable Through Title V Permit
23. The permittee shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name and applicable certification numbers of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was installed as replacement, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs. [District Rule 4622] Federally Enforceable Through Title V Permit
24. The O&M manual shall be kept at the dispensing operation and made available to any person who operates, inspects, maintains, repairs, or tests the equipment at the operation as well as to District personnel upon request. [District Rule 4622] Federally Enforceable Through Title V Permit
25. The permittee shall maintain monthly and annual gasoline throughput records. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
26. All records required by this permit shall be retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
27. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4621, 4622 and 4623. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
28. This unit is not equipment used for light crude oil and gas production, natural gas processing, nor organic liquid loading. Therefore, the requirements of County Rules 412.1 (Kern), and 413 (Kern), do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. {1706} This unit is not equipment used for light crude oil and gas production, natural gas processing, nor organic liquid loading, and is not an internal or external floating roof tank with capacity of 19,800 gallons or more. Therefore, the requirements of District Rules 4403 (as amended February 16, 1995), 4623, except section 5.4 (as amended December 17, 1992), and 4624 (as amended December 17, 1992) do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
30. This unit is not associated with loading at a bulk gasoline terminal (as defined in 40CFR §60.501). Therefore, the requirements of 40 CFR 60 Subpart XX do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-187-17

EXPIRATION DATE: 05/31/2021

SECTION: NW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3.0 MW COGEN FACILITY INCLUDING SOLAR CENTAUR MODEL T4701 GAS FIRED TURBINE ENGINE GENERATOR SET WITH INLET AIR EVAPORATIVE COOLER, GAS FIRED 31 MMBTU/HR MAXFIRE MODEL 110 SERIES DUCT BURNER, HEAT RECOVERY STEAM GENERATOR, SCR, AND KOCH COALESCER

PERMIT UNIT REQUIREMENTS

1. Gas turbine engine shall be equipped with water injection system. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine/duct burner system shall be equipped with recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Duct burner fuel gas supply shall be equipped with an operational injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Gas turbine engine shall not be operated when water or ammonia injection or SCR system is not operating. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Cogeneration unit shall be equipped with selective catalytic reduction. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NO_x concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
8. Permittee shall operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit
9. Exhaust shall be equipped with provisions for sampling ammonia concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Ammonia emissions shall not exceed 20 ppmv @ 15% O₂. [District Rule 4102]
11. Heat input to gas turbine engine/duct burner system shall not exceed 74.81 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Gas turbine engine and duct burner combined emission rates shall not exceed: 0.00285 lb-SO_x/MMBtu, 0.0066 lb-PM₁₀/MMBtu, 0.0021 lb-VOC/MMBtu (as methane). [District Rule 2201] Federally Enforceable Through Title V Permit
13. Except during transitional periods, gas turbine engine and duct burner combined emission rates shall not exceed 5 ppmv NO_x (as NO₂) @ 15% O₂ (0.0184 lb/MMBtu) nor 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703, 5.1.3 and 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Transitional period emissions shall not exceed: 35 ppmv NO_x (as NO₂) @ 15% O₂ (0.1289 lb/MMBtu), 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703, 3.29] Federally Enforceable Through Title V Permit
16. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.26] Federally Enforceable Through Title V Permit
17. Transitional Period is defined as any of the following: bypass transition period, primary re-ignition period, reduced load period, start-up or shutdown. [District Rule 4703, 3.33] Federally Enforceable Through Title V Permit
18. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during each transitional operation period. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
19. Gas turbine engine and duct burner shall only be fired on PUC quality or equivalent sulfur content natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
21. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
22. Source testing to demonstrate compliance with NO_x and CO emission limits shall be conducted annually. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
23. For source testing, NO_x emissions shall be averaged using consecutive 15-minute sampling periods over a three-hour period. [District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
24. Oxides of nitrogen emissions for compliance tests shall be determined by using EPA Method 7E or EPA Method 20. [District Rule 4703, 6.4.1] Federally Enforceable Through Title V Permit
25. Carbon monoxide emissions for compliance tests shall be determined by using EPA Test Methods 10 or 10B. [District Rule 4703, 6.4.2] Federally Enforceable Through Title V Permit
26. Oxygen content of the exhaust gas shall be determined by using EPA Methods 3, 3A, or 20. [District Rule 4703, 6.4.3] Federally Enforceable Through Title V Permit
27. The HHV and LHV of gaseous fuels shall be determined by using ASTM D3588-91, ASTM 1826-88, or ASTM 1945-81. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
28. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
29. The District must be notified 30 days prior to any compliance source testing and the owner shall submit a source test plan for District approval 15 days prior to source sampling. [District Rules 1081, 7.1 and 4703, 6.3] Federally Enforceable Through Title V Permit
30. Source testing shall be witnessed or authorized by District personnel, and the source test results shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.2 and 4703, 6.3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

31. The permittee shall monitor and record the stack concentration of NO_x, CO, O₂, and NH₃ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
32. If the NO_x, CO, O₂, and/or NH₃ concentrations, as measured by the permittee with a portable analyzer exceed the permitted emission limits, the permittee shall notify the District and return the NO_x, CO, O₂, and NH₃ concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emission limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
33. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NO_x output. [District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit
34. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
35. Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
36. Any one-hour period during which the average water-to-fuel ratio, as measured by the predictive monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
37. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used (liquid/gas). [District Rule 4703, 6.2.6] Federally Enforceable Through Title V Permit
39. The operator performing start-up or shutdown of a unit shall keep records of the duration of start-up or shutdown. [District Rule 4703, 6.2.8] Federally Enforceable Through Title V Permit
40. Permittee shall keep accurate daily records of the quantity and heating value (btu/scf) of the fuel gas supplied to the gas turbine engine/duct burner system. [District Rule 2201] Federally Enforceable Through Title V Permit
41. The ammonia injection rate in (lb/hour) shall be recorded daily. [40 CFR 64.3] Federally Enforceable Through Title V Permit
42. The owner or operator shall maintain all records for a period of five years from the date of data entry and shall make such records available to the APCO upon request. [District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit
43. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

44. A cogeneration facility which commenced construction prior to November 15, 1990, and was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale, is not an affected unit subject to the requirements of the Acid Rain Program. Therefore, the requirements of 40 CFR 72 do not apply to this source. A permit shield is granted from this requirement. [40 CFR 72.6(b)(4)(i) and District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-188-16

EXPIRATION DATE: 05/31/2021

SECTION: NW 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3.0 MW COGEN FACILITY INCLUDING SOLAR CENTAUR MODEL T4701 GAS FIRED TURBINE ENGINE GENERATOR SET WITH INLET AIR EVAPORATIVE COOLER, GAS FIRED 31 MMBTU/HR MAXFIRE MODEL 110 SERIES DUCT BURNER, HEAT RECOVERY STEAM GENERATOR, SCR, AND KOCH COALESCER

PERMIT UNIT REQUIREMENTS

1. Gas turbine engine shall be equipped with water injection system. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine/duct burner system shall be equipped with recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Duct burner fuel gas supply shall be equipped with an operational injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Gas turbine engine shall not be operated when water or ammonia injection or SCR system is not operating. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Cogeneration unit shall be equipped with selective catalytic reduction. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NO_x concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
8. Permittee shall operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit
9. Exhaust shall be equipped with provisions for sampling ammonia concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Ammonia emissions shall not exceed 20 ppmv @ 15% O₂. [District Rule 4102]
11. Heat input to gas turbine engine/duct burner system shall not exceed 74.81 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Gas turbine engine and duct burner combined emission rates shall not exceed: 0.00285 lb-SO_x/MMBtu, 0.0066 lb-PM₁₀/MMBtu, 0.0021 lb-VOC/MMBtu (as methane). [District Rule 2201] Federally Enforceable Through Title V Permit
13. Except during transitional periods, gas turbine engine and duct burner combined emission rates shall not exceed 5 ppmv NO_x (as NO₂) @ 15% O₂ (0.0184 lb/MMBtu) nor 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703, 5.1.3 and 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Transitional period emissions shall not exceed: 35 ppmv NO_x (as NO₂) @ 15% O₂ (0.1289 lb/MMBtu), 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703, 3.29] Federally Enforceable Through Title V Permit
16. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.26] Federally Enforceable Through Title V Permit
17. Transitional Period is defined as any of the following: bypass transition period, primary re-ignition period, reduced load period, start-up or shutdown. [District Rule 4703, 3.33] Federally Enforceable Through Title V Permit
18. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during each transitional operation period. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
19. Gas turbine engine and duct burner shall only be fired on PUC quality or equivalent sulfur content natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
21. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
22. Source testing to demonstrate compliance with NO_x and CO emission limits shall be conducted annually. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
23. For source testing, NO_x emissions shall be averaged using consecutive 15-minute sampling periods over a three-hour period. [District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
24. Oxides of nitrogen emissions for compliance tests shall be determined by using EPA Method 7E or EPA Method 20. [District Rule 4703, 6.4.1] Federally Enforceable Through Title V Permit
25. Carbon monoxide emissions for compliance tests shall be determined by using EPA Test Methods 10 or 10B. [District Rule 4703, 6.4.2] Federally Enforceable Through Title V Permit
26. Oxygen content of the exhaust gas shall be determined by using EPA Methods 3, 3A, or 20. [District Rule 4703, 6.4.3] Federally Enforceable Through Title V Permit
27. The HHV and LHV of gaseous fuels shall be determined by using ASTM D3588-91, ASTM 1826-88, or ASTM 1945-81. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
28. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
29. The District must be notified 30 days prior to any compliance source testing and the owner shall submit a source test plan for District approval 15 days prior to source sampling. [District Rules 1081, 7.1 and 4703, 6.3] Federally Enforceable Through Title V Permit
30. Source testing shall be witnessed or authorized by District personnel, and the source test results shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.2 and 4703, 6.3] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

31. The permittee shall monitor and record the stack concentration of NO_x, CO, O₂, and NH₃ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
32. If the NO_x, CO, O₂, and/or NH₃ concentrations, as measured by the permittee with a portable analyzer exceed the permitted emission limits, the permittee shall notify the District and return the NO_x, CO, O₂, and NH₃ concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emission limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
33. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NO_x output. [District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit
34. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
35. Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
36. Any one-hour period during which the average water-to-fuel ratio, as measured by the predictive monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
37. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used (liquid/gas). [District Rule 4703, 6.2.6] Federally Enforceable Through Title V Permit
39. The operator performing start-up or shutdown of a unit shall keep records of the duration of start-up or shutdown. [District Rule 4703, 6.2.8] Federally Enforceable Through Title V Permit
40. Permittee shall keep accurate daily records of the quantity and heating value (btu/scf) of the fuel gas supplied to the gas turbine engine/duct burner system. [District Rule 2201] Federally Enforceable Through Title V Permit
41. The ammonia injection rate in (lb/hour) shall be recorded daily. [40 CFR 64.3] Federally Enforceable Through Title V Permit
42. The owner or operator shall maintain all records for a period of five years from the date of data entry and shall make such records available to the APCO upon request. [District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit
43. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

44. A cogeneration facility which commenced construction prior to November 15, 1990, and was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale, is not an affected unit subject to the requirements of the Acid Rain Program. Therefore, the requirements of 40 CFR 72 do not apply to this source. A permit shield is granted from this requirement. [40 CFR 72.6(b)(4)(i) and District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-194-18

EXPIRATION DATE: 05/31/2021

SECTION: SE36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

5.0 MW COGEN FACILITY INCLUDING SOLAR TAURUS MODEL 60-T73005 GAS FIRED TURBINE ENGINE GENERATOR SET WITH SOLONOX COMBUSTORS, GAS FIRED MAXFIRE MODEL 110 SERIES DUCT BURNER, SCR, AND HEAT RECOVERY STEAM GENERATOR

PERMIT UNIT REQUIREMENTS

1. Lube oil vent relief valve emission rate shall not exceed PM10: 0.09 lb/hr, and VOC: 0.09 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except during periods of startup and shutdown, gas turbine engine and duct burner combined emission rates shall not exceed 5 ppmv NO_x (as NO₂) @ 15% O₂ (0.0184 lb/MMBtu) nor 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
3. Gas turbine engine and duct burner combined emission rates shall not exceed: 0.00285 lb-SO_x/MMBtu, 0.0066 lb-PM10/MMBtu, 0.0021 lb-VOC/MMBtu (as methane). [District Rule 2201] Federally Enforceable Through Title V Permit
4. Start-up and Shutdown emissions shall not exceed: 25 ppmv NO_x (as NO₂) @ 15% O₂ (0.0921 lb/MMBtu), 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
5. Ammonia emissions shall not exceed 20 ppmv @ 15% O₂. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Gas turbine engine start-up is that period of time not exceeding two hours in duration during which the unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
7. Gas turbine engine shutdown is that period of time not exceeding two hours in duration during which the unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
8. Transitional Period is defined as any of the following: bypass transition period, primary re-ignition period, reduced load period, start-up or shutdown. [District Rule 4703, 3.33] Federally Enforceable Through Title V Permit
9. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during each period of start-up or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Gas turbine engine and duct burner shall only be fired on PUC quality or equivalent sulfur content natural gas. [District Rule 2201 and 40 CFR 60.333(a) & (b); 60.332(a)] Federally Enforceable Through Title V Permit
11. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
13. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
14. The HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
15. Nitrogen oxides (NO_x) concentrations shall be determined using EPA Method 7E, 20, or ARB Method 100; CO using EPA Method 10 or ARB Method 100; and oxygen (O₂) using EPA Method 3, 3A, 20, or ARB Method 100. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit
16. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.2] Federally Enforceable Through Title V Permit
17. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NO_x output. [District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit
18. Permittee shall operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
19. Permittee shall operate, monitor and maintain the SoLoNO_x lean pre-mixed combustion system in full accordance with manufacturer's recommendations. [40 CFR 60.334; District Rule 4703, 6.2.2 and 6.2.5] Federally Enforceable Through Title V Permit
20. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
21. Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit
22. Gas turbine lube oil system atmospheric vent shall be equipped with aerosol/smoke control provisions. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Exhaust shall be equipped with provisions for sampling ammonia concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NO_x, CO, O₂, and NH₃ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. If the NO_x, CO, O₂, and/or NH₃ concentrations, as measured by the permittee with a portable analyzer exceed the permitted emission limits, the permittee shall notify the District and return the NO_x, CO, O₂, and NH₃ concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emission limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
26. Gas turbine engine/duct burner system shall be equipped with recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Heat input to gas turbine engine/duct burner system shall not exceed 78.34 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Gas turbine engine shall not be operated when ammonia injection or SCR system is not operating. [District Rule 2201] Federally Enforceable Through Title V Permit
29. NO_x and CO emissions shall be measured annually pursuant to requirements of Rule 4703 by District witnessed sample collection by independent laboratory corrected to 15% O₂ (dry). Test results shall be submitted within 60 days. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
30. For source testing, NO_x emissions shall be averaged using consecutive 15-minute sampling periods over a three-hour period. [District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
31. Operator shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
32. Duct burner fuel gas supply shall be equipped with injection pressure indicator. [District Rule 1070] Federally Enforceable Through Title V Permit
33. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
34. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
35. Permittee shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation, quantity of fuel used, and duration of all start-up and shutdown periods. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.6, 6.2.8] Federally Enforceable Through Title V Permit
36. Permittee shall keep accurate daily records of the quantity and heating value (btu/scf) of the fuel gas supplied to the gas turbine engine/duct burner system. [District Rule 2201] Federally Enforceable Through Title V Permit
37. A cogeneration facility which commenced construction prior to November 15, 1990, and was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale, is not an affected unit subject to the requirements of the Acid Rain Program. Therefore, the requirements of 40 CFR 72 do not apply to this source. A permit shield is granted from this requirement. [40 CFR 72.6(b)(4)(i) and District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. {1713} The following types of units are not affected units subject to the requirements of the Acid Rain Program: 1) A simple combustion turbine that commenced operation before November 15, 1990, 2) Any unit that, during 1985, did not serve a generator that produced electricity for sale and that did not, as of November 15, 1990, and does not currently, serve a generator that produces electricity for sale, 3) A cogeneration facility which for a unit that commenced construction prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale. Therefore, the requirements of 40 CFR 72.6 do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rule 1081, 4201, 3.1; Rules 406 (Fresno), 407 (Kings, San Joaquin, Stanislaus, Tulare, Merced, and Kern), and 404(Madera); 40 CFR 60.332(c), (d); 60.334 (b), and (c)(2); 60.335(d). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern and Stanislaus), and 110 (Madera); Rules 402 (Madera) and 404 (Fresno, Kern, Kings, San Joaquin, Merced, Stanislaus, Tulare); 40 CFR 60.332 (a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335 (a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-209-5

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#010554) AND ONE FREE WATER KNOCKOUT VESSEL (GAMBLE LEASE), EACH WITH A VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1372-210, '-211, '-212, AND '-213, AND VENTED TO TEOR OPERATION S-1372-100

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [District Rule 4623 and 17 CCR 95668] Federally Enforceable Through Title V Permit
3. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NOx); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NOx when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)] Federally Enforceable Through Title V Permit
5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
8. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
10. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623 (6/15/2023). [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule] Federally Enforceable Through Title V Permit
18. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
19. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623]
28. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
31. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669] Federally Enforceable Through Title V Permit
32. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-210-5

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#010555) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
3. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
10. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
19. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
31. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
32. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-211-5

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#006798) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
4. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
9. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
10. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
11. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
33. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
34. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-212-5

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10664) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
3. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
10. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
19. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
31. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
32. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-213-5

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,520 BBL FIXED ROOF CRUDE OIL STORAGE/ CLARIFIER TANK WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
3. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
9. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
10. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
11. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-214-5

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

250 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#GD-TK-1) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
3. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
10. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

17. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
19. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
31. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
33. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-215-4

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #10695 AND ONE FREE WATER KNOCKOUT VESSEL (MCFEE LEASE)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-216-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10694)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-217-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10716)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-218-8

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#10602) (HOPKINS LEASE) WITH VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1372-235, '-256, '-257, '-419, '-420, AND '-421 VENTING TO STEAM GENERATORS S-1372-18, '-31, AND TEOR SYSTEM S-1372-316

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-316. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
10. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
11. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
12. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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19. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
21. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
34. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
35. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-219-5

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

250 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#8472) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-220-6

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#8707) WITH VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1372-221, '-416, AND '-441 VENTED TO CASING VAPOR COLLECTION SYSTEM LISTED ON S-1372-100 (STAR FEE)

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
4. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices out of service, the vapors may be vented to the standby flare listed on permit S-1372-100. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with 17 CCR Section 95671 is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
9. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
11. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
12. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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19. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
21. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
34. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-221-5

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,600 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10602) CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-220 (STAR FEE)

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-220. [17 CCR 95668]
4. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices out of service, the vapors may be vented to the standby flare listed on permit S-1372-100. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with 17 CCR Section 95671 is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
9. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
11. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
12. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
21. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
25. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
27. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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28. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
29. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
30. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
34. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-222-5

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#6799)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-224-6

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10635) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid and tank may be open. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be enclosed with no openings or holes. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active and copies of all corresponding notices to the District shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
9. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
15. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
17. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
23. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
25. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
27. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
31. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
32. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
34. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-225-6

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10646) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid and tank may be open. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be enclosed with no openings or holes. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active and copies of all corresponding notices to the District shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
9. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
15. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
17. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
23. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
25. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
27. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
31. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
32. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
34. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-226-6

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF CRUDE OIL STORAGE/ CLARIFIER TANK WITH PV RELIEF VALVE AND THREE FREE WATER KNOCKOUT VESSELS

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-227-5

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

1,628 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#TK-1) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-235-6

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#010766) (HOPKINS LEASE) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON '218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
13. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
14. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
17. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
23. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
24. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
26. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
27. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
29. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
30. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
31. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-246-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #10357 AND FIVE FREE WATER KNOCKOUT VESSELS (BREMER LEASE) COMPRESSORS, VAPOR RECOVERY SYSTEM SHARED WITH S-1372-247, '-248, '-249, '-250, '-251, '-252, '-253, '-254, '-255, AND '-258, PIPING ROUTED TO DOGGR APPROVED WELLS OR SENT OFFSITE TO INSTALL VAPOR RECOVERY SYSTEM

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Collected vapors shall be discharged only to DOGGR approved waste gas injection wells, or sent offsite to steam generator S-1114-10. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
8. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
9. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
14. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
15. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
16. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
19. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
22. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
25. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
27. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
28. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
31. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
32. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
37. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit
38. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-247-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10413) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
11. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
13. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
14. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
16. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-248-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10336) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
12. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
13. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
22. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
24. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
25. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
30. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
31. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-249-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10337) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
12. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
13. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
22. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
24. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
25. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
30. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
31. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-250-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10358) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
12. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
13. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
22. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
24. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
25. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
30. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
31. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-251-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10356) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
12. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
13. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
22. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
24. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
25. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
30. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
31. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-252-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10420) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
12. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
13. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
22. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
24. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
25. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
30. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
31. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-253-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10421) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
12. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
13. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
22. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
24. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
25. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
30. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
31. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-254-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,023 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBWT-1) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
12. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
13. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
22. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
24. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
25. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
30. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
31. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-255-6

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

10,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBWT-2) VENTED TO VAPOR CONTROL SYSTEM S-1372-77 (BREMER LEASE) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. Tank shall be vented only to vapor recovery system listed on S-1372-77. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
28. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
31. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
34. Permittee shall maintain a written record of VOC content of tank vapor. [District Rule 2201] Federally Enforceable Through Title V Permit
35. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-256-6

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#UBFT-1) (HOPKINS LEASE) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON '218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
11. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
12. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
21. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
23. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
24. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
26. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
27. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
29. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
30. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
31. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-257-6

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#EBFT-1) (HOPKINS LEASE) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON '-218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
11. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
12. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
21. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
23. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
24. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
26. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
27. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
29. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
30. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
31. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-258-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBFT-1) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
12. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
13. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
22. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
24. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
25. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
30. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
31. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-259-6

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBST-1) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-263-8

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL RECEIVING TANK WITH GAS BOOT (#10757) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370

PERMIT UNIT REQUIREMENTS

1. VOC's collected from tank shall vent only to vapor control system S-1372-370. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
29. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
32. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
36. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-264-8

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,500 BBL FIXED ROOF CRUDE OIL WASH TANK (#1500WT) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370

PERMIT UNIT REQUIREMENTS

1. VOC's collected from tank shall vent only to vapor control system S-1372-370. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
19. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
21. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-265-8

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL LACT SHIPPING TANK (#10755) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370

PERMIT UNIT REQUIREMENTS

1. VOC's collected from tank shall vent only to vapor control system S-1372-370. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
19. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
21. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-266-6

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#500VR-1)

PERMIT UNIT REQUIREMENTS

1. The true vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rules 2010 and 4623] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
3. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
4. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
5. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
9. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
11. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
12. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
13. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
23. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
29. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
30. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-267-8

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#1000WT) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370

PERMIT UNIT REQUIREMENTS

1. VOC's collected from tank shall vent only to vapor control system S-1372-370. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
8. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
14. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
20. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
21. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
22. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
32. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-268-8

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF WASTE WATER STORAGE TANK (#1000WW-T) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370

PERMIT UNIT REQUIREMENTS

1. VOC's collected from tank shall vent only to vapor control system S-1372-370. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
8. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
14. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
20. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
21. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
22. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
32. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-270-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,500 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#5000WTR) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-271-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9935) WITH PV RELIEF VALVE AND ONE FREE WATER KNOCKOUT VESSEL (TUMBADOR LEASE)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-272-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9934) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-273-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10370) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-274-5

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

250 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH SHARED VAPOR CONTROL SYSTEM (SUMP TANK, TUMBADOR LEASE)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor loss prevention system (PTO # S-1372-76) consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The true vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in Section 6.2 of District Rule 4623 (Amended 12/17/92). Determinations shall be made annually during summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520] Federally Enforceable Through Title V Permit
4. Operator shall keep accurate records of types of material diverted into sump tank, storage temperature, and true vapor pressure of liquids stored. [District Rule 2520] Federally Enforceable Through Title V Permit
5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
9. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
11. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
22. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
32. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-275-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #9936 WITH PV RELIEF VALVE AND ONE FREE WATER KNOCKOUT VESSEL (DOME LEASE)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-276-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9937) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-278-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10368) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-279-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

4,121 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#6500 WTR) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-280-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (FUEL TK.) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-284-4

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,628 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9143-WT) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-285-4

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10494) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-286-4

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#2731) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-289-5

EXPIRATION DATE: 05/31/2021

SECTION: 22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK #6928 WITH PV RELIEF VALVE AND TWO FREE WATER KNOCKOUT VESSELS (KEENE LEASE)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-292-4

EXPIRATION DATE: 05/31/2021

SECTION: 22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#1783) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-293-4

EXPIRATION DATE: 05/31/2021

SECTION: 22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#KW-SB-1) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-294-4

EXPIRATION DATE: 05/31/2021

SECTION: 22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#KW-C-1) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-312-19

EXPIRATION DATE: 05/31/2021

SECTION: SW22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

TEOR OPERATION INCLUDING 165 STEAM ENHANCED WELLS, WELL VENT VAPOR CONTROL SYSTEM, WELL COLLECTION PIPING, STANDBY FLARE, VAPOR PIPING TO S-1372-17 AND STANDBY FLARE, THREE-PHASE SEPARATORS, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, COMPRESSORS, LUBE OIL TANKS, AND PUMPS (KEENE-KELLY-SOUTH CERRITOS-WILLIAMS LEASES)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of TEOR gas shall be tested not less than quarterly thereafter. If compliance with the 10% VOC content limit has been demonstrated for 8 consecutive quarters, then the testing frequency shall be annually. If an annual source test fails to show compliance, quarterly testing shall resume. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Permittee shall maintain a written record of VOC content of the TEOR gas. [District Rule 2201 and District Rule 9.3.2] Federally Enforceable Through Title V Permit
7. Operation shall include sulfa check system, to be used when necessary to meet sulfur compounds limits of standby flare and steam generators S-1372-17. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The compressed gas knockout scrubber shall precede the steam generator S-1372-17 and standby flare. [District Rule NSR] Federally Enforceable Through Title V Permit
9. Standby flare shall only be used to incinerate TEOR vapors when steam generator permit S-1372-17 is inoperative. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Oxides of sulfur emissions shall not exceed 1578.1 lb/day as SO₂ from the following steam generators: S-1372-8, '17, '18, '19, '20, '-111 and standby flare S-1372-312. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall maintain accurate records of well casing vapor H₂S concentration (periodic sampling of no less than once per quarter) and daily volume of casing vapor incinerated. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
16. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
17. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
18. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
19. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
20. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
21. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
22. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
23. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
24. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit
26. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
27. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
28. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
29. Casing vapor collection system shall be equipped with vapor flowrate indicator/recorder downstream of condensible recovery system measuring total flowrate. [District Rule 2201 and 1070] Federally Enforceable Through Title V Permit
30. Collected condensate shall be discharged into production pipeline. [District Rule 2201] Federally Enforceable Through Title V Permit
31. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
32. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
33. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
34. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

35. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
36. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
37. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
38. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
39. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
40. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

41. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
42. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
43. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
44. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
45. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
46. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
47. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
48. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
49. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
50. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit

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51. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
52. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit
53. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
54. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
55. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
56. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
57. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
58. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
59. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
60. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
61. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit

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62. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
63. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
64. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
65. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
66. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
67. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
68. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
69. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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70. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
71. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
72. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
73. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401 (6/15/2023), Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
74. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
75. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
76. {1294} The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

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77. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
78. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-313-4

EXPIRATION DATE: 05/31/2021

SECTION: 12NE **TOWNSHIP:** 28S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

500 BBL CRUDE OIL STORAGE TANK (TULARE W-T) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-314-4

EXPIRATION DATE: 05/31/2021

SECTION: 12NE **TOWNSHIP:** 28S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

500 BBL CRUDE OIL STORAGE TANK (UO 10600)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-315-4

EXPIRATION DATE: 05/31/2021

SECTION: 12NE **TOWNSHIP:** 28S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

500 BBL CRUDE OIL STORAGE TANK (UO 10601) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-316-24

EXPIRATION DATE: 05/31/2021

SECTION: NW10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

TEOR OPERATION SERVING 285 STEAM ENHANCED WELLS, WELL COLLECTION PIPING, FLARE, WELL VENT VAPOR CONTROL SYSTEM VAPOR PIPING TO FLARE, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, SCRUBBER, COMPRESSORS, LUBE OIL TANK AND SULFA TREAT SYSTEM (HOPKINS LEASE)

PERMIT UNIT REQUIREMENTS

1. Casing vapor collection system shall be equipped with vapor flowrate indicator/recorder downstream of condensible recovery system measuring total flowrate. [District Rule 2201] Federally Enforceable Through Title V Permit
2. TEOR gas shall only be incinerated in steam generators S-1372-1, '31, '319 or flare. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Steam generator #3, permit # S-1372-1, shall not operate when flare is incinerating TEOR waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Collected condensate shall be discharged into production pipeline. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of the collected well vent vapor shall not exceed 10% by weight. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
6. Emission rates from flare shall not exceed the following: PM10: 13.7 lb/MMscf, SO_x (as SO₂): 193.5 lb/day, NO_x (as NO₂): 140 lb/MMscf, VOC: 2.8 lb/MMscf, CO: 11.0 lb/MMscf. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.3] Federally Enforceable Through Title V Permit
9. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.1] Federally Enforceable Through Title V Permit
10. Permittee shall maintain accurate records of well casing vapor H₂S concentration (periodic sampling of no less than once per quarter), daily volume of casing vapor incinerated and resulting daily SO₂ emissions. [District Rule 1070 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
11. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
12. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit

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13. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
14. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
15. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
16. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
17. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
18. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
19. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
20. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit
21. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit

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22. The operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
23. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
24. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
25. Permittee shall maintain with the permit a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit
27. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
28. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
29. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
30. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
31. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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32. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
33. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
34. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
35. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
36. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit
37. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit

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38. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
39. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
40. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
41. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
42. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
43. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
44. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
45. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
46. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
47. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
48. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit

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49. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
50. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
51. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
52. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
53. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
54. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
55. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
56. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
57. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
58. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
59. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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60. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
61. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
62. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
63. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
64. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
65. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
66. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

67. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
68. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
69. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401 (6/15/2023), Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
70. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
71. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
72. {1294} The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
73. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-317-19

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

67.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR EQUIPPED WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE LOW NOX BURNER, FGR AND EXHAUST GAS SOX SCRUBBER W/ESP SHARED WITH S-1372-127 (MCKITTRICK FRONT LEASE)

PERMIT UNIT REQUIREMENTS

1. Unit shall be fired only on PUC quality natural gas or TEOR waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit
2. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained for each fuel line. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
3. Vapors from TEOR operation, permit # S-1372-100 may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Exhaust from unit shall be directed only to SO₂ scrubber/wet ESP listed on S-1372-127 except when burning PUC quality natural gas exclusively. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Scrubber/wet ESP listed on S-1372-127 shall be in operation when combusting TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit
7. This steam generator shall be exclusively fired on PUC quality natural gas when steam generators S-1372-13 and 24 are gas fired and incinerating TEOR waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306 and 4320] Federally Enforceable Through Title V Permit
9. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. SO_x (as SO₂) emissions from steam generator shall not exceed 180.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.008 lb-PM10/MMBtu, 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu, or 0.0039 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.008 lb-PM10/MMBtu, 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu, or 0.0039 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. NOx emissions shall not exceed either of the following: 19.8 lb/day and 6,403 lb/y. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Total sulfur oxide (SOx as SO2) emissions shall not exceed 1,075.2 lb/day from steam generators S-1372-1, '2, '4, '127, '317, and flare '100. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All vapor recovery gas burned in this device shall first be treated by the scrubber/wet ESP so at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
16. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
17. The SOx emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO2, inlet" is equal to the concentration of SOx (expressed as SO2) at the inlet side of the SOx emission control system (in lb/dscf) and "CSO2, outlet" is equal to the concentration of SOx (expressed as SO2) at the outlet side of the SOx emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
18. The total gas fired in this unit, on a monthly average, shall be less than 50% PUC quality natural gas, by volume. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet and no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet. PUC quality natural gas also means high methane gas of at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain monthly records of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit
20. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Methods 6, 6B, 8, or ARB 100. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Sulfur compound (SO2) emission limit compliance shall be demonstrated by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Compliance with casing gas sulfur compound emission limits shall be demonstrated by record keeping of TEOR gas flowrate and H2S concentration. [District Rule 1070] Federally Enforceable Through Title V Permit
23. The wet ESP's secondary DC voltage shall be monitored weekly to ensure it is operating between 35 to 50KV [District Rule 2201] Federally Enforceable Through Title V Permit
24. Permittee shall maintain daily records of volume of natural gas burned and TEOR waste gas incinerated. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Permittee shall measure and record, at least monthly, the sulfur content and BTU content of the TEOR waste gas incinerated in this unit. [District Rule 4406, 4.0] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. Permittee shall measure and record the natural gas sulfur content and BTU content at the time of NO_x testing, except for natural gas purchased from a PUC regulated utility. [District Rule 4406, 4.0] Federally Enforceable Through Title V Permit
27. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
28. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
35. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
38. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
40. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
41. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
42. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
43. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
44. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
45. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
46. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
47. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
48. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
49. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

50. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
51. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
52. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
53. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
54. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
55. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
56. Permittee shall maintain daily records of SO_x (as SO₂) emissions (lb/day) from steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
57. Permittee shall maintain records of the wet ESP's secondary DC voltage and shall be made readily available for District inspection upon request [District Rule 2201] Federally Enforceable Through Title V Permit
58. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
59. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
60. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

61. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
62. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-318-12

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

67.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR (HOPKINS LEASE)

PERMIT UNIT REQUIREMENTS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
3. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
4. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
5. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
6. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
7. {4565} Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
8. Steam generator shall only receive TEOR gas from TEOR permit S-1372-316, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
9. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320, 5.7.6.2] Federally Enforceable Through Title V Permit
10. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
11. Unit shall be fired only on PUC quality natural gas or TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Burner shall be equipped with operational TEOR gas volume flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit
14. Emission rates shall not exceed any of the following: PM₁₀: 0.014 lb/MMBtu, NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmvd @ 3% O₂, VOC: 0.039 lb/MMBtu, or CO: 138 ppmvd @ 3% O₂. [District Rules 2201; 4305, 5.1; 4306, 5.1; and 4320] Federally Enforceable Through Title V Permit
15. SO_x emissions shall not exceed 5.86 lb/hr. SO_x emissions limit shall be verified through records of quantity of TEOR fuel gas combusted and fuel gas sulfur concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Steam generators S-1372-10, -14, -23, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on PUC quality natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
35. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
36. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
45. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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48. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
50. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-319-22

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

67.5 MMBTU/HR NATURAL GAS/TEOR/TVR GAS-FIRED STEAM GENERATOR (#49) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR. OPERATING AT TWO LOCATIONS: MCKITTRICK FRONT (NW6, T30S R21E) AND HOPKINS LEASE (NW10, T29S R21E)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
4. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. This unit may operate at the following locations: NW Section 6, T30S, R21E (McKittrick Front) and NW Section 10, T29S, R21E (Hopkins Lease). [District Rule 2201] Federally Enforceable Through Title V Permit
8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas or TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Burner shall be equipped with operational TEOR gas volume flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Steam generator shall only receive TEOR gas from TEOR permit S-1372-316, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
12. When complying with SOx emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. Emission rates shall not exceed any of the following: PM₁₀: 0.014 lb/MMBtu, NO_x (as NO₂): 0.008 lb/MM Btu or 7 ppmvd @ 3% O₂, VOC: 0.039 lb/MMBtu, or CO: 138 ppmvd @ 3% O₂. [District Rule 2201 and District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. SO_x emissions shall not exceed 5.86 lb/hr. SO_x emissions limit shall be verified through records of quantity of TEOR fuel gas combusted and fuel gas sulfur concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
44. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-320-4

EXPIRATION DATE: 05/31/2021

SECTION: NE08 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,500 BBL FIXED ROOF STOCK TANK (TK #1) (MORRIS LEASE) WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
20. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
26. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. [District Rule 4623]
30. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-322-4

EXPIRATION DATE: 05/31/2021

SECTION: NE08 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,350 BBL WASH TANK (MORRIS LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
3. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
20. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
21. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
24. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
25. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
28. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-323-6

EXPIRATION DATE: 05/31/2021

SECTION: NW 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1372-324 AND '443 ROUTED TO CASING VAPOR COLLECTION SYSTEM LISTED ON PERMIT S-1372-100 (MCKITTRICK FRONT LEASE)

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
10. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
19. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
20. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
21. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
22. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
32. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
33. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
36. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-324-5

EXPIRATION DATE: 05/31/2021

SECTION: NW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH P/V VALVE CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-323 (MCKITTRICK FRONT LEASE)

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
29. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
32. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-329-10

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. The permittee shall use flue gas recirculation (FGR) when the steam generator is in operation. [District Rule 4305] Federally Enforceable Through Title V Permit
2. Only PUC-quality natural gas shall be burned. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
5. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Except during startup and shutdown when fired on natural gas, emissions rates from the unit shall not exceed any of the following limits: 7 ppmv NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 113.7 ppmv CO @ 3% O2 or 0.084 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4301, 4305, 4320, 4306, 4406, and 4801] Federally Enforceable Through Title V Permit
7. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
8. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
23. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
27. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
35. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
38. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-334-24

EXPIRATION DATE: 05/31/2021

SECTION: NW7 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

27.5 MMBTU/HR NATURAL GAS/WASTE GAS-FIRED STEAM GENERATOR (#56) (HSG #577) WITH FGR AND NORTH AMERICAN MAGNA-FLAME 4211 27-LE LOW-NOX BURNER OPERATED AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. This steam generator is approved to operate at the following locations: NW/4 Section 7 and SW/4 Section 6 of T30S R22E; NE/4 Section 20 of T29S R21E; and NE/4 Section 12 of T28S R20E. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Vapor recovery gas and natural gas lines to steam generator shall be equipped with operational volumetric flowrate indicators. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Total fuel usage shall not exceed 154 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Duration of start-up or shutdown shall not exceed 2 hours each per occurrence. During start-up or shutdown, the emission control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
13. Except during startup and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmv NO_x @ 3% O₂ (0.00863 lb/MMBtu), 9 ppmv SO_x @ 3% O₂ (0.0154 lb/MMBtu), 0.024 lb-PM₁₀/MMBtu, 30 ppmv CO @ 3% O₂ (0.0225 lb/MMBtu), or 7 ppmv VOC @ 3% O₂ (0.003 lb/MMBtu). [District Rules 2201, 4305, 5.1, 4306, 5.1, and 4320, 5.4] Federally Enforceable Through Title V Permit
14. Sulfur compound emissions shall not exceed 0.0077 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
31. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
43. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

45. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
46. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
48. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-355-13

EXPIRATION DATE: 05/31/2021

SECTION: SW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#52) (DIS #22457-79) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR (STAR FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Only natural gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Emissions from this unit shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @3% O2; or CO: 138 ppmv @3% O2. [District Rules 2201, 4305, 5.1, 4306, 5.1, and 4320] Federally Enforceable Through Title V Permit
4. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
5. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
20. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
24. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
25. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
26. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
27. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
33. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
34. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
35. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
37. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-356-13

EXPIRATION DATE: 05/31/2021

SECTION: SW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22468-79) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Only PUC-quality natural gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Emissions from this unit shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @3% O2; or CO: 138 ppmv @3% O2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. The steam generator shall be equipped with an FGR valve positioning indicator. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. Except during periods of steam generator startup/shutdown, steam generator shall not be operated unless flue gas recirculation system is operating. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator may be equipped with a programmable logic controller (PLC). [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
8. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
23. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
27. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
35. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
38. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-357-13

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22469-79) WITH A NORTH AMERICAN GLE
ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. {1829} The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
3. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
4. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
5. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
6. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
7. {4565} Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
8. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Only PUC-quality natural gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
12. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
13. Except during startup and shutdown emissions from this unit shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 7 ppmv @3% O2 or 0.008 lb/MMBtu; or CO: 138 ppmv @3% O2. [District Rules 2201, 4301, 4305, 4306, 4406, 4320, and 4801] Federally Enforceable Through Title V Permit
14. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
30. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
42. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
45. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
47. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-358-14

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22470-79) WITH FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
3. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
4. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
5. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
6. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
7. {4565} Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
8. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
9. When continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Only PUC-quality natural gas shall be used as fuel. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
12. Duration of start-up or shutdown shall not exceed 2 hours each per occurrence. During start-up or shutdown, the emission control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6, and 4306, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Except during startup or shutdown periods, emissions from the steam generator shall not exceed any of the following limits: 7 ppmv NO_x @ 3% O₂ (0.00863 lb/MMBtu), 0.003 lb-SO_x/MMBtu, 0.008 lb-PM₁₀/MMBtu, 30 ppmv CO @ 3% O₂ (.0225 lb/MMBtu), or 7 ppmv VOC @ 3% O₂ (0.003 lb/MMBtu). [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4320, 5.1] Federally Enforceable Through Title V Permit
14. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
30. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
42. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
45. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-359-11

EXPIRATION DATE: 05/31/2021

SECTION: SW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22632-80) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. Only PUC-quality natural gas shall be used as fuel. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
5. Except during startup and shutdown emissions from this unit shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @3% O2; or CO: 0.102 lb/MMBtu or 138 ppmv @3% O2. [District Rules 2201, 4301, 4305, 4306, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
6. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
7. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
22. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
26. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
27. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
34. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
35. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
37. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
39. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-370-8

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

TANK VAPOR CONTROL SYSTEM SERVING TANKS S-1372-263, -264, -265, -267 AND -268, WITH COMPRESSED VAPORS ROUTED TO STEAM GENERATOR PERMIT S-1372-8 AND TEOR SYSTEM PERMIT S-1372-74 FOR DISPOSAL

PERMIT UNIT REQUIREMENTS

1. Vapor control system shall route collected vapors into TEOR vapor control system S-1372-74 for disposal. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. Vapor control equipment compressor shall activate before the pressure relief valve on any of the units served by the vapor control equipment vents. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The vapor control equipment shall be capable of reducing VOC emissions by at least 95% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC emissions from fugitive components of vapor control system shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201] Federally Enforceable Through Title V Permit
6. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
7. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
8. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
9. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
10. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
12. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
13. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
14. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
15. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv from vapor control system components (downstream of control valve between vessel and vapor control system piping) shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-371-9

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH A NORTH AMERICAN MAGNA FLAME G-LE ULTRA LOW NOX BURNER, OXYGEN (O₂) CONTROLLER AND FLUE GAS RECIRCULATION, OPERATED AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
4. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Approved locations for this equipment: NW Section 10, Township 29S, Range 21E (South Belridge Oilfield, Hopkins), NE Section 12, Township 28S, Range 20E (South Belridge Oilfield, Dow Chanslor Fee near Lost Hills Road), and NE Section 19, Township 30S, Range 21E (McKittrick Oilfield, McKittrick 19Z Fee near Reward Road). [District Rule 4102] Federally Enforceable Through Title V Permit
8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
9. Steam generator shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.35 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
10. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
12. Duration of start-up or shutdown shall not exceed 2 hours each per occurrence. During start-up or shutdown, the emission control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6, and 4306, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Except during startup or shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmv NO_x @ 3% O₂ (0.00863 lb/MMBtu), 0.001 lb-SO_x/MMBtu, 0.0051 lb-PM₁₀/MMBtu, 30 ppmv CO @ 3% O₂ (0.0225 lb/MMBtu), or 7 ppmv VOC @ 3% O₂ (0.003 lb/MMBtu). [District Rules 2201, 4305, 5.1, 4306, 5.1, and 4320, 5.1] Federally Enforceable Through Title V Permit
14. Compliance with SO_x emissions limit shall be determined by fuel gas analysis using ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Compliance with fuel gas sulfur content shall be demonstrated annually. [District Rule 2201 and 4801] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
44. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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48. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-372-11

EXPIRATION DATE: 05/31/2021

SECTION: NW 3 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVR GAS-FIRED (TVR SYSTEM GAS ALLOWED AT REARDON LEASE ONLY) STEAM GENERATOR (#64) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, OXYGEN (O2) CONTROLLER AND FGR

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Approved locations for this equipment: NW/SW Section 3, Township 31S, Range 22E (Reardon Lease), SW Section 10, Township 31S, Range 22E (Midway Sunset Oilfield, E&M Lease near Derby Acres) and NE Section 19, Township 30S, Range 21E (McKittrick Oilfield, McKittrick 19Z Fee near Reward Road). [District Rule 4102]
8. When operated at permitted locations other than NW/SW Section 3, T31S, R22E (Reardon Lease), the steam generator shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.4 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
9. When operated at NW/SW Section 3, T31S, R22E (Reardon Lease), the steam generator shall be fired on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.4 grains of sulfur compounds (as S) per 100 dry scf of natural gas, or the natural gas may be blended with TVC gas resulting from any combination of tanks S-1372-388 through -392, that has been scrubbed to 95% control prior to the steam generator inlet, and with an H2S concentration of no greater than 1,750 ppmv at the steam generator inlet. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
10. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. Steam generator shall only receive combined TEOR/TVR gas from TEOR permit S-1372-387 (which may receive TVR gas from permit S-1372-388) and the sulfur content of the combined gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal using the sulfur scrubber listed on TEOR permit S-1372-387 prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
12. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
13. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. When PUC quality natural gas fired, emission rates shall not exceed any of the following: NO_x (as NO₂): 7 ppmv NO_x @ 3% O₂ or 0.008 lb/MMBtu, SO_x (as SO₂): 0.001 lb/MMBtu, PM₁₀: 0.005 lb/MMBtu, CO: 0.102 lb/MMBtu, VOC: 0.0055 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. When fired on a blend of PUC quality natural gas and scrubbed TVC (tank vapor control) gas, emission rates shall not exceed any of the following: 7 ppmv NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0730 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 0.102 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
16. TVC system gas sulfur content shall be scrubbed to 95% control prior to the fuel inlet in the sulfur removing media system associated with S-1372-387, and shall be combusted only at W1/2 Section 3, Township 31S, Range 22E (Reardon Lease) [District Rule 2201] Federally Enforceable Through Title V Permit
17. Sulfur content of blended PUC quality and scrubbed TVC system gas combusted by the steam generator shall not exceed 1,750 ppm H₂S. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The TVC system gas fuel rate to the steam generator shall not exceed 168.8 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility, or any malfunction of the air pollution control equipment. [District Rule 4001 and 40CFR60 Subpart Db] Federally Enforceable Through Title V Permit
20. Except during periods of steam generator startup or shutdown, the steam generator shall not be operated unless the flue gas recirculation system is operating. [District Rule 4305] Federally Enforceable Through Title V Permit
21. When the steam generator is fired on TVC system gas or TVC system gas blended with PUC quality natural gas, the TVC system gas shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of volume of PUC quality gas burned and TVC system gas incinerated, PUC quality gas and TVC system gas sulfur content, and PUC quality gas and TVC system gas higher heating value. [District Rule 1070] Federally Enforceable Through Title V Permit
23. The SLC includes steam generators S-1372-372 and -373 when operated at any permitted location, and the flare associated with permit S-1372-388. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Emissions from one steam generator shall not exceed any of the following: 4,380 lb/yr NO_x, 39,968 lb/yr SO_x, 2,738 lb/yr PM₁₀, 55,845 lb/yr CO, 3,011 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Emissions from the flare alone shall not exceed any of the following: 1,408 lb/yr NO_x, 13,294 lb/yr SO_x, 166 lb/yr PM₁₀, 7,659 lb/yr CO, 1,304 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Emissions from the flare and one steam generator shall not exceed any of the following: 13,562 lb/yr NO_x, 53,262 lb/yr SO_x, 3,238 lb/yr PM₁₀, 78,992 lb/yr CO, 6,952 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Emissions from two steam generators shall not exceed any of the following : 8,760 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Total emissions from all permit units in the SLC shall not exceed any of the following : 18,616 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Total TVC system gas use for units in the SLC plan shall not exceed 337.6 MMBtu/day. [District Rule 2201]
30. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
32. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District Rule 2201] Federally Enforceable Through Title V Permit
33. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Emissions assessed to the SLC plan for the flare shall not exceed any of the following: 23.0 lb/day NO_x, 216.8 lb/day SO_x, 2.7 lb/day PM₁₀, 124.9 lb/day CO, 21.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Emissions assessed to the SLC plan for each steam generator shall not exceed any of the following: 25.5 lb/day NO_x, 109.5 lb/day SO_x, 7.5 lb/day PM₁₀, 153.0 lb/day CO, 8.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Total combined emissions from all permit units in the SLC plan shall not exceed any of the following: 51.0 lb/day NO_x, 219.0 lb/day SO_x, 15.0 lb/day PM₁₀, 306.0 lb/day CO, 16.6 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
38. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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39. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
40. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
41. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
42. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
44. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
45. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
46. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
47. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
48. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
49. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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50. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
51. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
52. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
53. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
54. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
55. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
56. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
57. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
58. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
59. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
60. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
61. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

62. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
63. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
64. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
65. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
66. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
67. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
68. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
69. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-373-11

EXPIRATION DATE: 05/31/2021

SECTION: NW3 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#65) (DIS# 28623-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FGR

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Approved locations for this equipment: NW/SW Section 3, Township 31S, Range 22E (Reardon Lease), SW Section 10, Township 31S, Range 22E (Midway Sunset Oilfield, E&M Lease near Derby Acres) and NE Section 19, Township 30S, Range 21E (McKittrick Oilfield, McKittrick 19Z Fee near Reward Road). [District Rule 4102]
8. When operated at permitted locations other than NW/SW Section 3, T31S, R22E (Reardon Lease), the steam generator shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.4 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
9. When operated at NW/SW Section 3, T31S, R22E (Reardon Lease), the steam generator shall be fired on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.4 grains of sulfur compounds (as S) per 100 dry scf of natural gas, or the natural gas may be blended with TVC gas resulting from any combination of tanks S-1372-388 through -392, that has been scrubbed to 95% control prior to the steam generator inlet, and with an H₂S concentration of no greater than 1750 ppmv at the steam generator inlet. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Emissions shall not exceed any of the following: 27 lb NO_x/day, 4,380 lb NO_x/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
14. Except during startup and shutdown when PUC quality natural gas fired, emission rates shall not exceed any of the following: 7 ppmv NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0730 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 138 ppmv CO @ 3% O₂ or 0.102 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-387 so that at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
16. Sulfur content of blended PUC quality and scrubbed TVC system gas combusted by the steam generator shall not exceed 1,750 ppm H₂S. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The TVC system gas fuel rate to the steam generator shall not exceed 168.8 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Compliance with 95% by weight sulfur removal efficiency requirement shall be conducted annually. [District Rule 4320] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility, or any malfunction of the air pollution control equipment. [District Rule 4001 and 40CFR60 Subpart Db] Federally Enforceable Through Title V Permit
20. Except during periods of steam generator startup or shutdown, the steam generator shall not be operated unless the flue gas recirculation system is operating. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If the unit is fired on non-PUC quality fuel, and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
22. The SLC includes steam generators S-1372-372 and -373 when operated at any permitted location, and the flare associated with permit S-1372-388. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Emissions from one steam generator shall not exceed any of the following: 9,308 lb/yr NO_x, 39,968 lb/yr SO_x, 2,738 lb/yr PM₁₀, 55,845 lb/yr CO, 3,011 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Emissions from the flare alone shall not exceed any of the following: 1,408 lb/yr NO_x, 13,294 lb/yr SO_x, 166 lb/yr PM₁₀, 7,659 lb/yr CO, 1,304 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Emissions from the flare and one steam generator shall not exceed any of the following: 13,562 lb/yr NO_x, 53,262 lb/yr SO_x, 3,238 lb/yr PM₁₀, 78,992 lb/yr CO, 6,952 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Emissions from two steam generators shall not exceed any of the following : 18,616 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Total emissions from all permit units in the SLC shall not exceed any of the following : 18,616 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. Total TVC system gas use for units in the SLC plan shall not exceed 337.6 MMBtu/day. [District Rule 2201]
29. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District Rule 2201] Federally Enforceable Through Title V Permit
32. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District Rule 2201] Federally Enforceable Through Title V Permit
33. Emissions assessed to the SLC plan for the flare shall not exceed any of the following: 23.0 lb/day NO_x, 216.8 lb/day SO_x, 2.7 lb/day PM₁₀, 124.9 lb/day CO, 21.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Emissions assessed to the SLC plan for each steam generator shall not exceed any of the following: 25.5 lb/day NO_x, 109.5 lb/day SO_x, 7.5 lb/day PM₁₀, 153.0 lb/day CO, 8.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Total combined emissions from all permit units in the SLC plan shall not exceed any of the following: 51.0 lb/day NO_x, 219.0 lb/day SO_x, 15.0 lb/day PM₁₀, 306.0 lb/day CO, 16.6 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
37. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
38. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

40. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
41. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
43. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
44. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
45. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
46. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
47. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
48. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
49. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
50. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
51. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
52. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
53. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
54. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

55. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
56. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
57. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
58. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
59. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
60. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
61. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
62. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
63. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

64. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
65. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
66. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
67. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
68. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-374-9

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#57) (DIS# 21939-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. If the steam generator is fired exclusively on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
9. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 1070] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each non-certified fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. If the unit is not fired exclusively on PUC-regulated natural gas, compliance with SOx emission limits shall be demonstrated through fuel sulfur content analysis using ASTM D1072, D3246, D4084, D4468, D6667, or double GC for H₂S and Mercaptans. [District Rule 1070] Federally Enforceable Through Title V Permit
12. NOx emissions shall not exceed 7.0 ppmvd @ 3% O₂ or 0.008 lb/MMBtu referenced as NO₂. [District Rules 2201, 4306, and 4320] Federally Enforceable Through Title V Permit
13. CO emissions shall not exceed 26 ppmvd @ 3% O₂. [District Rule 2201] Federally Enforceable Through Title V Permit
14. SOx emissions shall not exceed 0.003 lb/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
15. PM₁₀ emissions shall not exceed 0.008 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. VOC emissions shall not exceed 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Permittee shall maintain a record of the date of initial operation. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
18. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
19. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22, and 4320] Federally Enforceable Through Title V Permit
20. Emissions shall not exceed any of the following: NOx: 27.0 lb/day and 4,380 lb/year, CO: 28.5 lb/day and 10,403 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. If either the NOx or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
37. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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38. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
39. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
40. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
42. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
43. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
44. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
45. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
47. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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48. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
49. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
50. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
51. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
52. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
53. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-375-7

EXPIRATION DATE: 05/31/2021

SECTION: 29 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#58) (DIS# 28623-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
2. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 1070] Federally Enforceable Through Title V Permit
3. If the unit is not fired exclusively on PUC-regulated natural gas, compliance with SO_x emission limits shall be demonstrated through fuel sulfur content analysis using ASTM D1072, D3246, D4084, D4468, D6667, or double GC for H₂S and Mercaptans. [District Rule 1070] Federally Enforceable Through Title V Permit
4. Emissions shall not exceed any of the following: 27 lb NO_x/day, 4,380 lb NO_x/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
7. Except during startup and shutdown emissions shall not exceed any of the following: NO_x: 7 ppmv @ 3% O₂ or 0.008 lb/MMBtu, CO: 26 ppmv @ 3 % O₂ or 0.019 lb/MMBtu, SO_x: 0.00285 lb/MMBtu, PM₁₀: 0.008 lb/MMBtu, and VOC 0.003 lb/MMBtu. [District Rules 2201, 4301, 4305, 4306, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
9. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
37. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-376-11

EXPIRATION DATE: 05/31/2021

SECTION: 29 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#59) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
8. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 1070] Federally Enforceable Through Title V Permit
10. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
13. Except during startup and shutdown emissions shall not exceed any of the following: NOx: 7 ppmv @ 3% O₂ or 0.008 lb/MMBtu, CO: 26 ppmv @ 3 % O₂ or 0.019 lb/MMBtu, SOx: 0.00285 lb/MMBtu, PM₁₀: 0.008 lb/MMBtu, and VOC 0.003 lb/MMBtu. [District Rules 2201, 4301, 4305, 4306, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
15. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NOx, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If either the NOx or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NOx and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
31. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
43. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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46. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-377-9

EXPIRATION DATE: 05/31/2021

SECTION: 29 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#60) (DIS# 28618-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. This permit unit is authorized to operate at the following locations: sec 29, T28S, R21E; SW/4 sec 16, T31S, R22E and sec 6, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
7. Except during startup and shutdown emissions shall not exceed any of the following: NOx: 7 ppmv @ 3% O2 or 0.008 lb/MMBtu, CO: 26 ppmv @ 3 % O2 or 0.019 lb/MMBtu, SOx: 0.00285 lb/MMBtu, PM10: 0.008 lb/MMBtu, and VOC 0.003 lb/MMBtu. [District Rules 2201, 4301, 4305, 4306, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
9. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
37. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. Formerly S-1547-698.
42. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-378-7

EXPIRATION DATE: 05/31/2021

SECTION: 34 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#34) (DIS #19965-74) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. Unit is approved for operation at the following locations: NE/4 Section 19, T30S, R21E (19Z Fee), NW/4 Section 10, T29S, R21E (Hopkins Fee), and Section 16, T31S, R22E (Bremer Fee). [District Rule 4102]
2. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the steam generator is fired exclusively on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 1070] Federally Enforceable Through Title V Permit
6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each non-certified fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070] Federally Enforceable Through Title V Permit
7. NO_x (as NO₂) emissions shall not exceed 7.0 ppmvd @ 3% O₂ or 0.008 lb/MMBtu. [District Rules 2201, 4306, and 4320] Federally Enforceable Through Title V Permit
8. CO emissions shall not exceed 26 ppmvd @ 3% O₂. [District Rule 2201] Federally Enforceable Through Title V Permit
9. SO_x emissions shall not exceed 0.003 lb/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
10. PM₁₀ emissions shall not exceed 0.008 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC emissions shall not exceed 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
13. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306, 3.25 and 3.22, and 4320] Federally Enforceable Through Title V Permit
15. Emissions shall not exceed any of the following: NO_x: 27.0 lb/day and 4,380 lb/year, CO: 28.5 lb/day and 10,403 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
44. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-379-7

EXPIRATION DATE: 05/31/2021

SECTION: 28 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#37) (DIS #20623-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. Unit is approved for operation at the following locations: NE/4 Section 19, T30S, R21E (19Z Fee), NW/4 Section 10, T29S, R21E (Hopkins Fee), and Section 16, T31S, R22E (Bremer Fee). [District Rule 4102]
2. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 1070] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each non-certified fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070] Federally Enforceable Through Title V Permit
6. NO_x (as NO₂) emissions shall not exceed 7.0 ppmvd @ 3% O₂ or 0.008 lb/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. CO emissions shall not exceed 26 ppmvd @ 3% O₂. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. SO_x emissions shall not exceed 0.003 lb/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. PM₁₀ emissions shall not exceed 0.008 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC emissions shall not exceed 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions shall not exceed any of the following: NO_x: 54.0 lb/day and 4,380 lb/year, CO: 28.5 lb/day and 10,403 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
13. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
15. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
31. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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36. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
43. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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46. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-387-7

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

TEOR OPERATION WITH 116 CYCLIC CLOSED CASING VENT WELLS, SEPARATORS, HEAT EXCHANGERS, SULFA TREAT SYSTEM, COMPRESSORS, PUMPS, VAPOR RECOVERY SKIDS, SCRUBBER(S) AND KNOCK OUT DRUM

PERMIT UNIT REQUIREMENTS

1. Total uncontrolled VOC emissions from all wells shall be reduced by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of the gas stream processed shall not exceed 10% of the total hydrocarbon content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. To qualify for quantification of no fugitive emissions, operator shall conduct quarterly gas sampling after the TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sample frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not within 48 hours of routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fluids produced from these cyclic wells with closed casing vents shall be introduced only to tanks S-1372-388, '-389, '-390, '-391 and '-392 that are vented to an approved vapor collection and control system achieving 99% control piped or to TEOR operation S-1114-66.; or to permit exempt storage equipment as defined by Rule 2020, Section 6.6. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
6. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
7. The requirements of District Rule 4401 (6/15/2023) shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
8. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs. [District Rule 4401] Federally Enforceable Through Title V Permit
9. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. [District Rule 4401] Federally Enforceable Through Title V Permit

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10. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401 (6/15/2023). The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
11. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401 (6/15/2023); 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
12. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
13. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
14. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
15. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit

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16. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 (6/15/2023) shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
17. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 (6/15/2023) shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
18. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
19. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
20. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
21. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
22. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
23. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
24. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
25. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

26. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401 (6/15/2023), or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
27. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit
28. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
29. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
30. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
31. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
32. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
33. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
34. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
35. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
36. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401 (6/15/2023). The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit

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37. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401 (6/15/2023). The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
38. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
39. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
40. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
41. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
42. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
43. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
44. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

45. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
46. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
47. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
48. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401 (6/15/2023), Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
49. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
50. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
51. Permittee shall maintain a current listing of all wells assigned to this permit. The listing shall be updated monthly and made readily available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

52. Permittee shall maintain a current list of all thermally enhanced production wells associated with this operation and accurate records of fugitive inspection component counts of non-exempt components and leak inspection results, and make such records readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
53. Permittee shall maintain a written record of VOC content of the gas and location of sampling point. [District Rule 1070] Federally Enforceable Through Title V Permit
54. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-388-7

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3,000 BBL STOCK TANK VENTED TO VAPOR CONTROL SYSTEM WITH A 1.0 MMSCF/DAY JOHN ZINK AZDAIR PLASMA AIR-ASSISTED PRODUCED GAS FLARE SHARED BETWEEN PERMIT UNITS S-1372-388, '389, '390, '391 AND '392 INCLUDING INLET COOLER, SUCTION SCRUBBER, DISCHARGE SCRUBBER, PUMPS, AND COMPRESSORS

PERMIT UNIT REQUIREMENTS

1. Sulfa treat systems shall be used as needed to meet the emission limits of the flare. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Emission rates shall not exceed any of the following: 0.068 lb-NO_x/MMBtu, 0.6422 lb-SO_x/MMBtu, 0.008 lb-PM₁₀/MMBtu, 0.370 lb-CO/MMBtu, or 0.063 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
3. TVC (tank vapor control) system gas sulfur content shall be scrubbed to 95% control at the outlet of the sulfur removing media system associated with S-1372-387, and shall be combusted only at W1/2 Section 3, Township 31S, Range 22E (Reardon Lease). [District Rule 2201] Federally Enforceable Through Title V Permit
4. Sulfur content of scrubbed TVC system gas combusted by the flare shall not exceed 1,750 ppm H₂S. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The TVC system gas flow rate to the flare shall not exceed 337.6 MMBtu/day or 20,700 MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Flare pilot shall be fired on PUC quality natural gas, and shall not exceed 3.6 Mscf/day [District Rule 2201] Federally Enforceable Through Title V Permit
7. {2933} Flares shall be designed for and operated with no visible emissions except for periods not to exceed a total of three (3) minutes in any one (1) hour. [District Rule 4101, 5.1 and 40 CFR 60.18(c)(1)] Federally Enforceable Through Title V Permit
8. {2330} The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3 and 40CFR 60.18(f)(2)] Federally Enforceable Through Title V Permit
9. {2332} Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
10. {2333} Open flares in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
11. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
12. {2329} The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2 and 40CFR 60.18(c)(2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. {2331} Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4 and 40CFR 60.18(f)(2)] Federally Enforceable Through Title V Permit
14. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
15. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
16. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8]
17. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10]
18. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1., 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1]
19. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1]
20. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3]
22. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
23. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
24. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Permittee shall maintain records of volume of fuel gas burned and TVC system gas incinerated, fuel gas and TVC system gas sulfur content, and fuel gas and TVC system gas higher heating value. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
26. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2 and 40 CFR 60.18(d)] Federally Enforceable Through Title V Permit
27. TVC (tank vapor control) system gas shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2201] Federally Enforceable Through Title V Permit
28. If the unit is fired on non-PUC quality fuel, and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2201 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2 and Kern County Rule 407] Federally Enforceable Through Title V Permit
30. The Specific Limiting Condition (SLC) includes steam generators S-1372-372 and -373 when operated at any permitted location, and the flare associated with permit S-1372-388. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Emissions from one steam generator shall not exceed any of the following: 9,308 lb/yr NOx, 39,968 lb/yr SOx, 2,738 lb/yr PM10, 55,845 lb/yr CO, 3,011 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. Emissions from the flare alone shall not exceed any of the following: 1,408 lb/yr NO_x, 13,294 lb/yr SO_x, 166 lb/yr PM₁₀, 7,659 lb/yr CO, 1,304 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
33. Emissions from the flare and one steam generator shall not exceed any of the following: 13,562 lb/yr NO_x, 53,262 lb/yr SO_x, 3,238 lb/yr PM₁₀, 78,992 lb/yr CO, 6,952 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Emissions from two steam generators shall not exceed any of the following : 18,616 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Total emissions from all permit units in the SLC shall not exceed any of the following : 18,616 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Total TVC system gas use for units in the SLC plan shall not exceed 337.6 MMBtu/day. [District Rule 2201]
37. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
38. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
39. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District Rule 2201] Federally Enforceable Through Title V Permit
40. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District Rule 2201] Federally Enforceable Through Title V Permit
41. Emissions assessed to the SLC plan for the flare shall not exceed any of the following: 23.0 lb/day NO_x, 216.8 lb/day SO_x, 2.7 lb/day PM₁₀, 124.9 lb/day CO, 21.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
42. Emissions assessed to the SLC plan for each steam generator shall not exceed any of the following: 25.5 lb/day NO_x, 109.5 lb/day SO_x, 7.5 lb/day PM₁₀, 153.0 lb/day CO, 8.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
43. Total combined emissions from all permit units in the SLC plan shall not exceed any of the following: 51.0 lb/day NO_x, 219.0 lb/day SO_x, 15.0 lb/day PM₁₀, 306.0 lb/day CO, 16.6 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
44. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
45. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
46. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
47. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
48. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

49. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
50. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
51. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
52. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
53. Permittee shall maintain records of volume of PUC quality gas burned and TVC system gas incinerated, PUC quality gas and TVC system gas sulfur content, and PUC quality gas and TVC system gas higher heating value. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-389-4

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3,000 BBL REJECT TANK (T-440) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of hydrocarbons in tank vapor system and appurtenant equipment, including tank blanket gas, shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rules 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. To qualify for quantification of no fugitive emissions, operator shall conduct quarterly gas sampling after the TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sample frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not within 48 hours of routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
29. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
32. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. The permittee shall keep accurate records of vapor VOC concentration and types of liquids stored. [District Rule 2201] Federally Enforceable Through Title V Permit
36. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-390-4

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3,000 BBL CLARIFIER TANK (T-310) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of hydrocarbons in tank vapor system and appurtenant equipment, including tank blanket gas, shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. To qualify for quantification of no fugitive emissions, operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
29. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
32. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
36. The permittee shall keep accurate records of vapor VOC concentration and types of liquids stored. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-391-4

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1,000 BBL SURGE TANK (T-320) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of hydrocarbons in tank vapor system and appurtenant equipment, including tank blanket gas, shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. To qualify for quantification of no fugitive emissions, operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
29. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
32. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
36. The permittee shall keep accurate records of vapor VOC concentration and types of liquids stored. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-392-4

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1,000 BBL DRAIN TANK (T-600) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of hydrocarbons in tank vapor system and appurtenant equipment, including tank blanket gas, shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
29. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
32. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
36. The permittee shall keep accurate records of vapor VOC concentration and types of liquids stored. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

***San Joaquin Valley
Air Pollution Control District***

PERMIT UNIT: S-1372-393-4

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF WASTE WATER TANK (#T480) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-370

PERMIT UNIT REQUIREMENTS

1. This tank shall only store clean produced water as defined by Section 3.10 of District Rule 1020. [District Rules 1020 and 2201] Federally Enforceable Through Title V Permit
2. VOC emissions from this tank shall not exceed 0.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-394-6

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SG #67) WITH NORTH AMERICAN GLE MODEL G ULTRA LOW NOX BURNER, FGR, AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
3. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306 and 40 CFR 60 Subpart Dc Section 60.48c(g)] Federally Enforceable Through Title V Permit
4. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOX @ 3% O2 or 0.008 lb-NOX/MMBtu, 0.00285 lb-SOX/MMBtu, 0.0076 lb-PM10/MMBtu, 30 ppmvd CO @ 3% O2 or 0.022 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 9 ppmvd NOX @ 3% O2 or 0.011 lb-NOX/MMBtu, 0.00285 lb-SOX/MMBtu, 0.0076 lb-PM10/MMBtu, 30 ppmvd CO @ 3% O2 or 0.022 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Permittee shall record monthly fuel consumption. [District Rules 4001 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
8. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
10. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
37. {519} Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-395-5

EXPIRATION DATE: 05/31/2021

SECTION: NE 8 **TOWNSHIP:** 30 S **RANGE:** 22 E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE MODEL G ULTRA LOW NOX BURNER, FGR, AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. Fuel gas sulfur content shall not exceed 1.0 gr S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Emissions from the natural gas-fired unit shall not exceed 0.0076 lb-PM10/MMBtu and 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu or 30 ppmvd CO @ 3% O2 or 0.022 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 47.6 lb-NOx/day nor 5,896 lb-NOx/yr and 66.0 lb/day CO nor 16,381 lb/yr. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. During an initial shakedown period not to exceed 60 calendar days from initial operation of the equipment authorized by this ATC, NOx emissions shall not exceed 15 ppmvd @ 3% O2 or 0.018 lb/MMBtu. The shakedown period shall be concluded upon completion of the initial start-up compliance source test, and shall not exceed 60 days. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, 4320 and 40 CFR 60 Subpart Dc Section 60.48c(g)] Federally Enforceable Through Title V Permit
14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 1070, 2201, and 2520] Federally Enforceable Through Title V Permit
25. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201, and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, and 2520] Federally Enforceable Through Title V Permit
27. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Permittee shall record monthly fuel consumption. [District Rules 4001 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
32. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rules 1070, 2201, and 2520] Federally Enforceable Through Title V Permit
33. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

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San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-404-4

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

TEOR SYSTEM INCLUDING 92 CLOSED VENT STEAM ENHANCED WELLS ROUTED TO VAPOR CONTROLLED 2-PHASE SEPARATOR AND TANKS S-1372-405 AND -406

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of the gas in the casing collection system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct and keep records of quarterly sampling of gas handled by the casing collection system to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If fluids sampled are less than 10% VOC by weight for eight consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
4. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
5. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs. [District Rule 4401] Federally Enforceable Through Title V Permit
6. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. [District Rule 4401] Federally Enforceable Through Title V Permit
7. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
9. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
10. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
11. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
12. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit
13. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit

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14. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
15. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
17. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401]
18. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
19. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
20. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
21. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
22. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
23. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
24. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit

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25. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
26. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
27. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401]
28. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
29. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
30. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
31. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
32. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
33. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
34. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
35. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit

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36. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
37. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
38. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
39. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
40. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
41. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
42. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit

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43. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
44. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
45. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401 (6/15/2023), Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
46. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
47. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
48. Permittee shall maintain a current roster of all wells connected to this system. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
49. Records of the VOC content of the gas shall be maintained and made readily available for District inspection upon request for a period of 5 years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
50. Permittee shall maintain records of annual testing demonstrating that the water content of fluids processed by components in water/oil service is greater than 50% by weight [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-405-3

EXPIRATION DATE: 05/31/2021

SECTION: 19 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3000 BBL CRUDE OIL TANK T-140 SERVED BY VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER(S), COMPRESSOR(S), KNOCKOUT DRUM(S), PUMP(S), AND SULFUR REMOVAL

PERMIT UNIT REQUIREMENTS

1. Before disposal of VOC vapors by well injection, the applicant shall obtain written notification from DOGGR that the wells are approvable for injection. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Maximum VOC content of tank vapor shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The vapor piping to S-1372-100 shall be equipped with a check valve operated to prevent S-1372-100's vapors from entering S-1372-405's vapor space. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
6. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit

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11. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
12. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule and 4623] Federally Enforceable Through Title V Permit
16. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

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20. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
21. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
23. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
24. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
26. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
27. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

29. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
30. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
31. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
36. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Permittee shall maintain records of annual testing demonstrating that the water content of fluids processed by components in water/oil service is greater than 50% by weight [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-406-2

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3000 BBL CRUDE OIL TANK T-180 SERVED BY VAPOR CONTROL SYSTEM LISTED ON TEOR PERMIT S-1372-405

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of tank vapor shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Permittee shall maintain records of annual testing demonstrating that the water content of fluids processed by components in water/oil service is greater than 50% by weight [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-407-2

EXPIRATION DATE: 05/31/2021

SECTION: NE8 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK

PERMIT UNIT REQUIREMENTS

1. Tank crude oil throughput shall not exceed 1,400 bbl/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. True vapor pressure (TVP) of liquids received, held or stored in this tank shall not exceed 0.2 psia. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. Tank shall be operated at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC emission rate shall not exceed 19.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
12. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
22. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
30. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-408-4

EXPIRATION DATE: 05/31/2021

SECTION: NE19 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

6.6 MMBTU/HR FLARE INDUSTRIES MODEL SF-VP-0616 COANDA EFFECT STANDBY FLARE WITH AUTOIGNITION SERVED BY GAS SCRUBBER; PROPANE AND/OR PUC NATURAL GAS AS PILOT FUEL (19Z LEASE)

PERMIT UNIT REQUIREMENTS

1. The flare shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Prior to combustion in the flare, the produced gas shall be routed through the scrubber located at site of the flare. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The scrubber serving the flare shall achieve at least 95% sulfur removal. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
6. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare. The pilot need not be present when the flare is isolated for required flare maintenance. [District Rule 4311] Federally Enforceable Through Title V Permit
7. The flare shall be equipped with a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device capable of continuously detecting at least one pilot flame or the flare flame is present. [District Rule 4311] Federally Enforceable Through Title V Permit
8. Flare shall not be operated continuously for more than 30 consecutive days. Flare is not continuous when flaring has ceased for three (3) or more consecutive hours. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Maximum amount of gas combusted shall not exceed any of the following limits: 157.8 MMBtu/day and 1,889 MMBtu/year. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
11. H₂S content of flared gas shall not exceed 1,250 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NO_x (as NO₂): 0.068 lb/MMBtu; PM₁₀: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.27 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Gas analysis to demonstrate compliance with the scrubber sulfur removal efficiency shall be conducted at inlet and outlet of the scrubber, under conditions representative of normal operation by an independent testing laboratory. The compliance testing frequency shall be semi-annually [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
14. To show compliance with sulfur emission limits (ppmv as H₂S), the gas being flared shall be tested weekly for sulfur content. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for the flared gas, then the compliance testing frequency shall be semi-annually. If the semi-annual sulfur content test fails to show compliance, weekly testing shall resume. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Using a trained observer as defined in EPA Method 22, operator shall check for visible emissions for a period of 15 minutes each time the flare is brought from standby to active service and at least once every two weeks thereafter as long as the flare is in active service. If visible emissions are detected at any time during this period, the operator shall make the necessary adjustments to eliminate the visible emissions. If the observed visible emissions cannot be eliminated within 24 hours, the operator shall demonstrate compliance with the visible emissions limit of this permit using EPA Method 22 and an observation period of two hours. A record containing the results of these observations shall be maintained, which also includes company name, process unit, observer's name and affiliation, date, estimated wind speed and direction, sky condition, and the observer's location relative to the source and sun. [District Rule 2520] Federally Enforceable Through Title V Permit
16. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP) and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined in this rule and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 4311] Federally Enforceable Through Title V Permit
17. The operator shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. [District Rule 4311] Federally Enforceable Through Title V Permit
18. Flares that the operator can verify, based on permit conditions, that are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
19. A Reportable Flare Event is defined as any flaring where more than 500,000 standard cubic feet of vent gas is flared per calendar day, or where sulfur oxide emissions are greater than 500 pounds per calendar day. [District Rule 4311] Federally Enforceable Through Title V Permit
20. Every five years after the initial Flare Minimization Plan (FMP) submittal, the operator shall submit an updated FMP for the flare to the APCO for approval. The current FMP shall remain in effect until the updated FMP is approved by the APCO. If the operator fails to submit an updated FMP, the existing FMP shall no longer be considered an approved plan. [District Rule 4311] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The Flare Minimization Plan (FMP) shall include, but is not limited to, the following: 1) A description and technical specifications for the flare and associated knock-out pots, surge drums, water seals and flare gas recovery systems; 2) Detailed process flow diagrams of all upstream equipment and process units venting to the flare, identifying the type and location of all control equipment; 3) A description of equipment, processes, or procedures the operator plans to install or implement to eliminate or minimize flaring and planned date of installation or implementation; 4) An evaluation of prevention measures to reduce flaring that has occurred or may be expected to occur during planned major maintenance activities, including startup and shutdown; 5) An evaluation of preventative measures to reduce flaring that may be expected to occur due to issues of gas quantity and quality. The evaluation shall include an audit of the vent gas recovery capacity of the flare system, the storage capacity available for excess vent gases, and the scrubbing capacity available for vent gases including any limitations associated with scrubbing vent gases for use as a fuel; and shall determine the feasibility of reducing flaring through the recovery, treatment and use of the gas or other means; 6) An evaluation of preventative measures to reduce flaring caused by the recurrent failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. The evaluation shall determine the adequacy of existing maintenance schedules and protocols for such equipment. A failure is recurrent if it occurs more than twice during any 5-year period as a result of the same cause as identified in accordance with Section 6.2.2; 7) Any other information requested by the APCO as necessary for determination of compliance with applicable provisions of this rule. [District Rule 4311] Federally Enforceable Through Title V Permit
22. Effective on and after January 1, 2024, the operator shall monitor the vent gas flow to the flare with a flow-measuring device or other parameters as specified in this permit. The operator shall determine the heating value (Btu per cubic foot) of the vent gas annually in accordance with Section 6.3.6. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of exceeding the annual throughput thresholds in Table 2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311] Federally Enforceable Through Title V Permit
24. The operator shall submit an annual report to the APCO that summarizes all Reportable Flaring Events that occurred during the previous 12-month period. Beginning January 1, 2024, the report shall be submitted within 30 days following the end of the previous calendar year. The report shall include, but not limited to, the information stated in Section 6.2.2 of this rule. [District Rule 4311] Federally Enforceable Through Title V Permit
25. Until January 1, 2024, the operator shall submit an annual monitoring report to the APCO within 30 days following the end of each 12-month period. On and after January 1, 2024, and annually thereafter, the operator shall submit the annual monitoring report in an electronic format approved by the District to the APCO within 30 days following the end of each calendar year for all required monitoring under those sections. The report shall include the applicable data stated in Section 6.2.3 of this rule. [District Rule 4311] Federally Enforceable Through Title V Permit
26. Compliance with the requirements of Rule 4311 shall be determined by the following test methods: VOC (as carbon), EPA Method 25; NOx in lb/MMBtu, EPA Method 19; NOx and O2 concentrations, EPA Methods 3A or 7E, or ARB Method 100. [District Rule 4311] Federally Enforceable Through Title V Permit
27. The vent gas flow shall be determined using one or more of the following methods: EPA Methods 1 and 2; a verification method recommended by the manufacturer of the flow monitoring equipment; tracer gas dilution or velocity; or other flow monitors or process monitors that can provide comparison data on a vent stream that is being directed past the ultrasonic flow meter. [District Rule 4311] Federally Enforceable Through Title V Permit
28. The heating value of flare gas shall be determined by ASTM D1826-88 or ASTM D1945-81 in conjunction with ASTM D3588-89; alternately, an operator may elect to use a default heating value from Table 4 of this rule. [District Rule 4311] Federally Enforceable Through Title V Permit
29. The sulfur content of the gas being flared shall be determined using ASTM D1072, D3031, D4084, D3246, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2201 and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

30. The operator shall keep a copy of the flare minimization plan on site for District inspection upon request. [District Rule 4311] Federally Enforceable Through Title V Permit
31. The operator shall keep a copy annual reports submitted to APCO pursuant Section 6.2. [District Rule 4311] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate records of flared gas higher heating value, daily and annual quantities of produced gas, pilot gas, and sweep gas combusted in the flare, and flared gas concentration of H₂S. [District Rules 2201, 2520, and 4311] Federally Enforceable Through Title V Permit
33. The operator shall maintain records of the monitoring data collected by the vent gas flow measuring device. [District Rule 4311] Federally Enforceable Through Title V Permit
34. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201, 2520, and 4311] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-409-3

EXPIRATION DATE: 05/31/2021

SECTION: NE06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF WASH TANK WITH PV VENT (CYMRIC OIL FIELD)

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in the conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid, tank may be open, and leak-free conditions pertaining to relief valve shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be enclosed with no holes or openings and shall be subject to normal leak free requirements pertaining to relief valve. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Tank shall be operated at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
8. This tank shall only receive, store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.1 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Daily average tank crude oil throughput shall not exceed 20 barrels per day. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Permittee shall conduct True Vapor Pressure (TVP) and API gravity testing of the crude oil stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. In lieu of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP testing of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. [District Rule 4623, 6.2.1] Federally Enforceable Through Title V Permit
13. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323-94, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 20 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
14. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 (2000) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
15. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
16. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-410-3

EXPIRATION DATE: 05/31/2021

SECTION: NE06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

200 BBL FIXED ROOF STOCK TANK WITH PV VENT (CYMRIC OIL FIELD)

PERMIT UNIT REQUIREMENTS

1. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid, tank may be open, and leak-free conditions pertaining to relief valve shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be enclosed with no holes or openings and shall be subject to normal leak free requirements pertaining to relief valve. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Tank shall be operated at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
8. This tank shall only receive, store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.1 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Daily average tank crude oil throughput shall not exceed 20 barrels per day. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Permittee shall conduct True Vapor Pressure (TVP) and API gravity testing of the crude oil stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. In lieu of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP testing of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. [District Rule 4623, 6.2.1] Federally Enforceable Through Title V Permit
13. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323-94, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 20 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
14. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 (2000) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
15. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
16. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-411-6

EXPIRATION DATE: 05/31/2021

SECTION: SE 10 **TOWNSHIP:** 29 S **RANGE:** 21 E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME G-LE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR #68)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. {4562} Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. {4560} While dormant, normal source testing shall not be required. [District Rule 2080]
4. {4563} Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. {4564} Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. The refractory curing period is the time required to gradually increase the firing rate and internal temperature of a unit to thermally temper and set the optimal properties of new refractory material that has been installed as part of a unit's initial commissioning or has been replaced as part of a subsequent maintenance or repair procedure. The refractory curing period following the replacement of material as part of a maintenance or repair procedure shall not exceed 30 hours total of actual burner operation per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During any refractory curing period, operator shall limit emissions to the extent possible by optimizing the performance of the low the NOx burner and flue gas recirculation system as can be accommodated by refractory curing activities, by following good work practices and fuel conserving measures and by completing all work in an expeditious manner. Operator shall keep a record of the specific activities undertaken as part of all refractory curing periods and the duration of each activity and shall make the records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
9. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]
10. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]
11. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
12. The steam generator exhaust stack shall be at least 25 feet high. [District Rule 4102]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Emission rates, except during startup, shutdown and refractory curing, shall not exceed any of the following limits: NOx (as NOx): 7 ppmvd @ 3% O₂, 20.6 lb-NOx/day nor CO: 50 ppmvd @ 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Emission rates shall not exceed any of the following: SOx: 0.00285 lb/MMBtu; PM₁₀: 0.0076 lb/MMBtu; or VOC: 0.0055 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Emissions rate of NOx shall not exceed 6,344 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The permittee shall monitor and record the stack concentration of NOx, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
31. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
32. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit
34. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-412-2

EXPIRATION DATE: 05/31/2021

SECTION: NE06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,265 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-100 WITH TWO PERMIT EXEMPT BURNERS (NATURAL GAS FIRED, 5 MMBTU/HR OR LESS)

PERMIT UNIT REQUIREMENTS

1. The unit shall not operate within 2,437 feet of the nearest receptor. [District Rule 4102]
2. The heater treater shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This heater treater shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2080] Federally Enforceable Through Title V Permit
5. The VOC content of heater treater vapor recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
7. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
8. All piping, fittings, and valves on this heater treater shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The heater treater shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Rule 4623 Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Operator shall conduct quarterly gas sampling for the heater treater to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this heater treater at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this heater treater in order to maintain exemption from the rule. [District Rule 2080] Federally Enforceable Through Title V Permit
15. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the heater treater. The permittee shall also conduct an API gravity testing. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. Permittee shall maintain records of the tank identification number, Permit to Operate number, vapor VOC concentration, type of stored organic liquid, storage temperature, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 2080] Federally Enforceable Through Title V Permit
17. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 2080] Federally Enforceable Through Title V Permit
18. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-413-3

EXPIRATION DATE: 05/31/2021

SECTION: NW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE BURNER AND A FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. The refractory curing period is the time required to gradually increase the firing rate and internal temperature of a unit to thermally temper and set the optimal properties of new refractory material that has been installed as part of a unit's initial commissioning or has been replaced as part of a subsequent maintenance or repair procedure. The refractory curing period following the replacement of material as part of a maintenance or repair procedure shall not exceed 30 hours total of actual burner operation per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit
2. During the initial commissioning period and any refractory curing period, operator shall limit emissions to the extent possible by optimizing the performance of the low NO_x burner and flue gas recirculation system as can be accommodated by individual initial commissioning and refractory curing activities, by following good work practices and fuel conserving measures and by completing all work in an expeditious manner. Operator shall keep a record of the specific activities undertaken as part of the initial commissioning period and all refractory curing periods and the duration of each activity and shall make the records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
3. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
4. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Emission rates, except during startup and shutdown shall not exceed any of the following: NO_x (as NO_x): 5 ppmvd @ 3% O₂; or CO: 30 ppmvd @ 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following: SO_x: 0.00285 lb/MMBtu; PM₁₀: 0.003 lb/MMBtu; or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions rate of NO_x shall not exceed 16.3 lb/day or 4,468 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions rate of CO shall not exceed 50.0 lb/day or 16,381 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
23. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
24. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
25. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit
26. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit
27. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-414-4

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE BURNER AND A FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. This steam generator is approved to operate at the following locations: SE/4 Sec. 10, T29S, R21E and NW/4 Sec. 6, T30S, R22E. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
2. The refractory curing period is the time required to gradually increase the firing rate and internal temperature of a unit to thermally temper and set the optimal properties of new refractory material that has been replaced as part of a subsequent maintenance or repair procedure. The refractory curing period following the replacement of material as part of a maintenance or repair procedure shall not exceed 30 hours total of actual burner operation per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit
3. During the refractory curing period, operator shall limit emissions to the extent possible by optimizing the performance of the low NOx burner and flue gas recirculation system as can be accommodated by the refractory curing activities, by following good work practices and fuel conserving measures and by completing all work in an expeditious manner. Operator shall keep a record of the specific activities undertaken as part of the refractory curing periods and the duration of each activity and shall make the records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
5. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Emission rates, except during startup and shutdown shall not exceed any of the following: NOx (as NOx): 5 ppmvd @ 3% O₂; or CO: 30 ppmvd @ 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Emission rates shall not exceed any of the following: SOx: 0.00285 lb/MMBtu; PM₁₀: 0.003 lb/MMBtu; or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions rate of NOx shall not exceed 16.3 lb/day or 4,468 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions rate of CO shall not exceed 50.0 lb/day or 16,381 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
14. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
24. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
26. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit
27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit
28. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-416-3

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK WITH P/V VALVE CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-220 (STAR FEE)

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-220. [District Rule 4623 and 17 CCR 95668] Federally Enforceable Through Title V Permit
4. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices out of service, the vapors may be vented to the standby flare listed on permit S-1372-100. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with 17 CCR Section 95671 is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
10. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
11. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
22. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
25. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
28. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
29. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
30. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
36. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-417-3

EXPIRATION DATE: 05/31/2021

SECTION: NW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#71), WITH NORTH AMERICAN GLE ULTRA LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM (DOME)

PERMIT UNIT REQUIREMENTS

1. This steam generator is approved to operate at the following locations: NW/4 Sec. 23, T31S, R22E and NW/4 Sec. 6, T30S, R22E. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
2. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Emissions rates shall not exceed 16.7 lb-NO_x/day NO_x nor 4,617 lb-NO_x/yr and 56.6 lb-CO/day nor 13,775 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
14. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-418-3

EXPIRATION DATE: 05/31/2021

SECTION: NW10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN GLE ULTRA LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM (HOPKINS)

PERMIT UNIT REQUIREMENTS

1. This steam generator is approved to operate at the following locations: NW/4 Sec. 10, T29S, R21E and NW/4 Sec. 6, T30S, R22E. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
2. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Emissions rates shall not exceed 16.7 lb-NO_x/day NO_x nor 4,617 lb-NO_x/yr and 56.6 lb-CO/day nor 13,775 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
14. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
32. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-419-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3000 BBL FIXED-ROOF SUMP TANK (HOPKINS LEASE, T-5) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
9. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
11. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
22. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
25. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
27. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
29. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
30. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
34. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
35. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-420-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED-ROOF CLARIFIER TANK (HOPKINS LEASE, T-6) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
9. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
11. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
22. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
25. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 4623] Federally Enforceable Through Title V Permit
27. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
29. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
30. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
34. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
35. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-421-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

10,000 BBL FIXED-ROOF CLARIFIER TANK (HOPKINS LEASE, T-7) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
9. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
11. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
22. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
25. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
33. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
34. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-422-2

EXPIRATION DATE: 05/31/2021

SECTION: NW 7 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-433) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum fuel sulfur content shall not exceed 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The higher heating value of each non-certified fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D 3588. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Except for periods of startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.005 lb-PM10/MMBtu, 35 ppmvd CO @ 3% O2 or 0.026 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
5. Maximum NOx emissions from the steam generator, including start-up and shutdown, shall not exceed 19.7 lb-NOx/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
19. Permittee shall determine sulfur content of combusted gas weekly for eight consecutive weeks. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly sulfur testing shall resume if quarterly testing does not indicate compliance. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. First of the weekly gas analyses shall be done using laboratory analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
20. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
26. Permittee shall maintain daily records of the type and quantity of fuel combusted by the steam generator. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit
28. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-423-2

EXPIRATION DATE: 05/31/2021

SECTION: NW 7 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-434) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum fuel sulfur content shall not exceed 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The higher heating value of each non-certified fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D 3588. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Except for periods of startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.005 lb-PM10/MMBtu, 35 ppmvd CO @ 3% O2 or 0.026 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
5. Maximum NOx emissions from the steam generator, including start-up and shutdown, shall not exceed 19.7 lb-NOx/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
19. Permittee shall determine sulfur content of combusted gas weekly for eight consecutive weeks. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly sulfur testing shall resume if quarterly testing does not indicate compliance. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. First of the weekly gas analyses shall be done using laboratory analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
20. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
26. Permittee shall maintain daily records of the type and quantity of fuel combusted by the steam generator. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit
28. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-424-2

EXPIRATION DATE: 05/31/2021

SECTION: NW 7 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-442) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum fuel sulfur content shall not exceed 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The higher heating value of each non-certified fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D 3588. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Except for periods of startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.005 lb-PM10/MMBtu, 35 ppmvd CO @ 3% O2 or 0.026 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
5. Maximum NOx emissions from the steam generator, including start-up and shutdown, shall not exceed 19.7 lb-NOx/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
19. Permittee shall determine sulfur content of combusted gas weekly for eight consecutive weeks. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly sulfur testing shall resume if quarterly testing does not indicate compliance. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. First of the weekly gas analyses shall be done using laboratory analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
20. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
26. Permittee shall maintain daily records of the type and quantity of fuel combusted by the steam generator. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit
28. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-425-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH A NORTH AMERICAN GLE BURNER, OR EQUIVALENT, AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates shall not exceed 12.0 lb-NO_x/day NO_x nor 3,395 lb-NO_x/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-426-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 4 STEAM DRIVE WELLS

PERMIT UNIT REQUIREMENTS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The operation shall be equipped with production well vent vapor collection piping network, one water cooled heat exchanger, one gas liquid separator and non-condensable vapor shall be incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District Rule 4401] Federally Enforceable Through Title V Permit
4. All wells served by vapor collection system shall be shut in and shall not vent to atmosphere in event of failure of incineration system. [District Rule 2201] Federally Enforceable Through Title V Permit
5. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
6. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
7. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
8. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
9. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
11. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401, Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
12. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
13. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
14. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit
15. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

16. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
17. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
19. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
20. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
21. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
22. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
23. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
24. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
25. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
26. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
28. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
29. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
30. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
31. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
32. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
33. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
34. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
35. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
36. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
37. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
39. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
40. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
41. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
42. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
43. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
44. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

45. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
46. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
47. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401, Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
48. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
49. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-429-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

18 MMBTU/HR LPG OR NATURAL GAS-FIRED STEAM GENERATOR

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4301] Federally Enforceable Through Title V Permit
6. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
7. Generator shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit
8. If continuous operation oxygen analyzer/controller is utilized, excess O₂ shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions rates from the LPG and/or natural gas-fired unit shall not exceed any of the following limits: 30 ppmv NO_x @ 3% O₂, 0.017 lb-SO_x/MMBtu, 0.008 lb-PM₁₀/MMBtu, 115 ppmv CO @ 3% O₂, or 0.006 lb-VOC/MMBtu. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-430-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL WASH TANK WITH PV RELIEF VALVE (BAND FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. Tank shall operate at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC emission rate from the tank shall not exceed 4.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
12. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
22. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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29. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
30. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-431-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL TANK WITH PV RELIEF VALVE (BAND FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
3. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Crude oil throughput shall not exceed 200 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emission rate from the tank shall not exceed 11.2 lb/day. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
12. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
22. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

29. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
30. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-432-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL TANK WITH PV RELIEF VALVE (BAND FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
3. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Crude oil throughput shall not exceed 200 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emission rate from the tank shall not exceed 11.2 lb/day. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
12. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
22. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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29. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
30. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-433-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL WASH TANK WITH PV RELIEF VALVE (MIDWAY PACIFIC LEASE)

PERMIT UNIT REQUIREMENTS

1. Tank shall operate at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC emission rate from the tank shall not exceed 4.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
12. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
22. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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29. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
30. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-434-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL TANK WITH PV RELIEF VALVE (MIDWAY PACIFIC LEASE)

PERMIT UNIT REQUIREMENTS

1. Crude oil throughput shall not exceed 200 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC emission rate from the tank shall not exceed 11.2 lb/day. [District Rule 2201]
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
12. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
22. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
30. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-435-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL TANK WITH PV RELIEF VALVE (MIDWAY PACIFIC LEASE)

PERMIT UNIT REQUIREMENTS

1. Crude oil throughput shall not exceed 200 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC emission rate from the tank shall not exceed 11.2 lb/day. [District Rule 2201]
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
5. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
12. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
22. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
27. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
30. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
33. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-436-2

EXPIRATION DATE: 05/31/2021

SECTION: 22 **TOWNSHIP:** T32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#81) WITH A NORTH AMERICAN G-LE STANDARD BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. The equipment authorized by this permit shall only operate within either of the following locations: Section 6, Township 30S, Range 22E or Section 22, Township 32S Range 23E. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0061 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates during startup and shutdown shall not exceed 0.0182 lb-NO_x/MMBtu or 0.0739 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Emissions shall not exceed any of the following limits, where annual limits are based on a rolling 12 month period: 16.6 lb-NOx/day, 4,542 lb-NOx/yr, 5.8 lb-SOx/day, 2,122 lb-SOx/yr, 6.1 lb-PM10/day, 2,234 lb-PM10/yr, 56.6 lb-CO/day, 13,775 lb-CO/yr, 6.1 lb-VOC/day or 2,234 lb-VOC/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duration of startup and shutdown (combined) shall not exceed 4.0 hr day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure NOx, and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
29. Permittee shall keep daily and cumulative rolling 12 month records of the startup and shutdown durations and number of startup and shutdown occurrences. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Monthly VOC and CO emissions shall be calculated as follows: monthly VOC emissions in lbs/month = total hours of startup and shutdown x 1.5470 and monthly CO emissions in lbs/month = total hours of startup and shutdown x 6.2815. [District Rule 2201] Federally Enforceable Through Title V Permit
31. On a monthly basis, the permittee shall calculate and record the VOC and CO emissions in pounds for the prior 12 calendar month period. [District Rule 2201] Federally Enforceable Through Title V Permit
32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-437-1

EXPIRATION DATE: 05/31/2021

SECTION: NW 7 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#76) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed 16.7 lb-NO_x/day or 4617 lb-NO_x/yr or 55.6 lb-CO/day or 13,775 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates during startup and shutdown shall not exceed 0.018 lb-NO_x/MMBtu or 0.074 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup and shutdown (combined) shall not exceed 4.0 hr day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rule]
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. . [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-438-2

EXPIRATION DATE: 05/31/2021

SECTION: NE7 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#77) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed 16.7 lb-NO_x/day or 4617 lb-NO_x/yr or 55.6 lb-CO/day or 13,775 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates during startup and shutdown shall not exceed 0.018 lb-NO_x/MMBtu or 0.074 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup and shutdown (combined) shall not exceed 4.0 hr day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rule]
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. . [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-439-1

EXPIRATION DATE: 05/31/2021

SECTION: 7 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#78) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed 16.7 lb/day NO_x nor 4617 lb/yr NO_x, 5.8 lb/day SO_x nor 2122 lb/yr SO_x, 6.1 lb/day PM₁₀ nor 2234 lb/yr PM₁₀, 55.6 lb/day CO nor 13,775 lb/yr CO, and 6.1 lb/day VOCs nor 2234 lb/yr VOCs. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates during startup and shutdown shall not exceed 0.018 lb-NO_x/MMBtu or 0.074 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup and shutdown (combined) shall not exceed 4.0 hr day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320]
19. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. . [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-440-1

EXPIRATION DATE: 05/31/2021

SECTION: 7 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#79) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed 16.7 lb/day NO_x nor 4617 lb/yr NO_x, 5.8 lb/day SO_x nor 2122 lb/yr SO_x, 6.1 lb/day PM₁₀ nor 2234 lb/yr PM₁₀, 55.6 lb/day CO nor 13,775 lb/yr CO, and 6.1 lb/day VOCs nor 2234 lb/yr VOCs. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates during startup and shutdown shall not exceed 0.018 lb-NO_x/MMBtu or 0.074 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup and shutdown (combined) shall not exceed 4.0 hr day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure NO_x, and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. . [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-441-1

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF CRUDE OIL STORAGE/CLARIFIER TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-220 (STAR FEE)

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-220. [17 CCR 95668]
4. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices out of service, the vapors may be vented to the standby flare listed on permit S-1372-100. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with 17 CCR Section 95671 is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
7. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
10. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
11. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
12. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
21. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
23. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
24. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
25. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
26. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
27. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
29. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
30. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-442-1

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL DRAIN TANK WITH PV RELIEF VALVE

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC emission rate from the tank shall not exceed 1.8 lb/day. [District Rule] Federally Enforceable Through Title V Permit
3. Crude oil throughput shall not exceed 10 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {2480} This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
7. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
13. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
15. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
21. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
24. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
28. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
30. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
31. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
34. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-443-1

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF CRUDE OIL STORAGE/CLARIFIER TANK SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON S-1372-323

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
11. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
14. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
20. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
22. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
25. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
32. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-448-1

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

300 BBL FIXED ROOF CONSTANT LEVEL BLOWDOWN/DRAIN TANK WITH PV RELIEF VALVE (E&M LEASE)

PERMIT UNIT REQUIREMENTS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Crude oil throughput shall not exceed 25 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC emission rate from the tank shall not exceed 0.4 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit
5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
7. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
14. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
22. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
24. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
25. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
27. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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28. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
29. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit
31. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
32. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
33. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
34. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
35. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-449-1

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL DRAIN TANK WITH PV VALVE (E&M LEASE)

PERMIT UNIT REQUIREMENTS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.11 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Crude oil throughput shall not exceed 10 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emission rate from the tank shall not exceed 0.5 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit
6. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
13. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
15. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
24. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
27. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
28. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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30. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
31. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
34. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-450-1

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** R22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL TANK WITH PVRV (DOME LEASE)

PERMIT UNIT REQUIREMENTS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.15 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Crude oil throughput shall not exceed 20 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emission rate from the tank shall not exceed 0.5 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit
6. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
13. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
15. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
24. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
27. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
28. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

30. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
31. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
34. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-458-1

EXPIRATION DATE: 05/31/2021

SECTION: SE23 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1.9 MMBTU/HR VERTICAL HEATER TREATER FIRED ON LEASE GAS (RIPLEY-TATUM LEASE)

PERMIT UNIT REQUIREMENTS

1. Orifice plates shall have a visible ID tab to confirm orifice plate installation and orifice plate sizing. [District Rule 2050] Federally Enforceable Through Title V Permit
2. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4301] Federally Enforceable Through Title V Permit
3. The sulfur compounds concentration in the fuel gas shall not exceed 1 grain S/100 dscf (17 ppmv H₂S). [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
4. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 83 ppmvd NO_x @ 3% O₂ or 0.1 lb-NO_x/MMBtu, 0.003 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 115 ppmvd CO @ 3% O₂ or 0.084 lb-CO/MMBtu, 13 ppmvd VOC @ 3% O₂ or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
5. Testing to demonstrate compliance with the production gas fuel sulfur content limit shall be conducted weekly. Once eight (8) consecutive weekly tests show compliance, the fuel sulfur content testing frequency may be reduced to semi-annually. If a semi-annual test shows violation of the sulfur content limit, then weekly testing shall resume and continue until eight (8) consecutive tests show compliance. Once compliance is shown on eight (8) consecutive weekly tests, then testing may return to semi-annually. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Sulfur content of the production gas being fired in the heater treater shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or double GC for H₂S and mercaptans. [District Rule 1081] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

***San Joaquin Valley
Air Pollution Control District***

PERMIT UNIT: S-1372-459-1

EXPIRATION DATE: 05/31/2021

SECTION: SE23 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

0.5 MMBTU/HR TANK HEATER FIRED ON LEASE GAS (RIPLEY-TATUM LEASE)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [Kern County Rule 407, District Rules 4301 and 4801] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-463-1

EXPIRATION DATE: 05/31/2021

SECTION: SE23 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

25.2 MMBTU/HR NATIONAL CO S/N S8736 NATURAL GAS/PROPANE/PRODUCTION GAS-FIRED STEAM GENERATOR WITH BURNER DIFFUSER PLATE AND FLUE GAS RECIRCULATION (FGR)

PERMIT UNIT REQUIREMENTS

1. The fuel supply line shall be physically disconnected from this unit. [District Rule 4320] Federally Enforceable Through Title V Permit
2. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 4320] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 4320] Federally Enforceable Through Title V Permit
4. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Emissions from the natural gas/propane/production gas-fired unit shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.018 lb-NO_x/MMBtu, 0.05 lb-SO_x/MMBtu, 0.0044 lb-PM₁₀/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4801] Federally Enforceable Through Title V Permit
7. H₂S concentration shall not exceed 1,000 ppm in lease gas. Testing to measure lease gas sulfur content shall be conducted using ASTM D3246 oxidation combustion microcoulometric or ASTM D6228 double GC for H₂S and mercaptans. [District Rules 1081 and 4801] Federally Enforceable Through Title V Permit
8. Compliance with sulfur limit shall be verified by lease gas sulfur sample no less than every calendar quarter in which the unit is operated. [District Rule 1081] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
12. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
18. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of recommencing operation of this unit. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
22. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. Permittee shall maintain daily records of volume of fuel gas burned and lease gas incinerated, calendar quarterly lease and fuel gas sulfur content and BTU content. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. The permittee shall maintain records of fuel hhv, lease gas sulfur content and cumulative annual fuel use. [District Rule 2201] Federally Enforceable Through Title V Permit
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-464-1

EXPIRATION DATE: 05/31/2021

SECTION: SE23 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION INCLUDING 99 CYCLICALLY STEAMED ENHANCED CRUDE OIL PRODUCTION WELLS WITH CASING COLLECTION SYSTEM CONNECTED TO SALES GAS PIPELINE AND OPTIONAL SULFUR REMOVAL SYSTEM

PERMIT UNIT REQUIREMENTS

1. Vapors from the well vents shall be treated by SulfaTreat system prior to incineration. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Sulfa Treat system shall be used as necessary to ensure that sulfur content of gas combusted in steam generator S-1372-469 shall not exceed 1 gr S/ 100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Well vent vapor from this operation shall only be incinerated in vapor control equipment listed in permits S-1372-458, -459, -463, or -469. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Fugitive VOC emission rate shall not exceed 2.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
10. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
11. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
13. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
14. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
15. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
16. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
17. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
18. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
20. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
21. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
22. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
23. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
24. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
25. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
26. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
27. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
28. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
30. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit
31. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
32. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
33. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
34. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
35. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
36. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
37. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
38. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
39. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

40. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
41. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
42. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
43. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
44. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
45. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
46. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
47. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

48. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
49. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
50. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
51. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401, Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
52. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
53. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
54. The permittee shall keep accurate records of component counts for a period of five years and shall make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-469-1

EXPIRATION DATE: 05/31/2021

SECTION: SE14 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO GAS/CASING GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE LOW-NOX BURNER AND FLUE GAS RECIRCULATION (HOPCO, H-2, DIS# 39454-87)

PERMIT UNIT REQUIREMENTS

1. The following locations are approved for the operation of this equipment: SE/23, T 11N, 23 W; SE14, 31S, 22E; SW14, 31S, 22E. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No modification to this unit shall be performed without an Authority to Construct for such modifications(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
3. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit
4. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit if unit has not been previously source tested as per schedule required by Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. Operators shall notify the District at least seven (7) calendar days prior to commencing operation of this dormant emissions unit, at which time this permit will be administratively modified to remove DEU references. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
9. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102] Federally Enforceable Through Title V Permit
10. Sulfur removal equipment shall be installed as necessary to ensure that gaseous fuels other than propane contain no more than 1.0 gr S/100 scf before combustion. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. The unit shall only be fired on PUC-quality natural gas, propane, or produced/TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Sulfur content of propane shall not exceed 15 grain per 100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Sulfur content of combusted produced/TEOR gas shall not exceed 1 gr S/ 100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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14. When fired on natural gas or produced/TEOR gas, emissions rates from the unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. When fired on propane, emissions rates from the unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0166 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Upon recommencing operation, permittee shall determine sulfur content of scrubbed produced gas weekly for eight consecutive weeks. Once eight (8) consecutive weekly tests show compliance, the fuel sulfur content testing frequency may be reduced to semi-annually. If a semi-annual test shows violation of the sulfur content limit, then weekly testing shall resume and continue until eight (8) consecutive tests show compliance. Once compliance is shown on eight (8) consecutive weekly tests, then testing may return to semi-annually. Weekly gas analysis shall be performed using Draeger tubes and semi-annual analysis using ASTM method D3246 or double GC for H₂S and mercaptans. First of the weekly gas analyses shall be done using laboratory analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
17. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Upon recommencing operation, the permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Upon recommencing operation, the permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Compliance with the fuel gas sulfur compound concentration requirement may be demonstrated by firing the unit only on PUC regulated natural gas, or by fuel analysis. [District Rule 2201] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Upon recommencing operation, source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2, and fuel gas sulfur content - ASTM D1072, ASTM D3246, ASTM D6228 (GC-FPD) or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit
32. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-470-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

250 BBL FIXED ROOF CRUDE OIL STOCK TANK WITH P/V VENT (RIPLEY-TATUM LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.2 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. Emissions from this tank shall not exceed 2.2 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Throughput for this tank shall not exceed 100 bbl/day on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank, in order to maintain exemption from Rule 4623. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
6. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Operator shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records shall be retained for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-471-1

EXPIRATION DATE: 05/31/2021

SECTION: SE23 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

250 BBL FIXED ROOF CRUDE OIL DRAIN TANK WITH P/V VENT (RIPLEY TATUM LEASE)

PERMIT UNIT REQUIREMENTS

1. Crude oil throughput shall not exceed 5 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. If the tank has the Potential to Emit greater than or equal to six (6) tons per year of VOC and actual emissions are greater than or equal to four (4) tons per year using a generally accepted model or calculation methodology, the operator must install a vapor recovery system meeting the specifications described in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
4. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. During a District inspection, a facility shall be considered in violation of District Rule 4623 (6/15/2023) if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, defined as the dripping of organic liquid at a rate of more than 3 drops per minute, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The operator shall notify the APCO in writing at least three (3) days prior to performing interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being cleaned, 2) The date and time that tank cleaning activities will begin, 3) The method to be used to clean the tank, including any solvents to be used, and 4) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
10. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623 (6/15/2023), an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
20. The operator shall conduct true vapor pressure (TVP) testing and API gravity testing of the organic liquid stored in this tank at least once every 24 months and whenever there is a change in the source or type of organic liquid stored in this tank. The TVP testing shall be conducted during the months of June through September at the actual storage temperature of the organic liquid in the tank. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
21. In lieu of testing each fixed roof or upstream of each fixed roof tank not meeting the control system requirements of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023), the operator may conduct TVP testing of a representative fixed roof tank provided that the following requirements are satisfied: (1) The selection of a representative, uncontrolled fixed roof tank is submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) One fixed roof tank not meeting the control systems of District Rule 4623, Sections 5.3, 5.4, 5.5, and 5.6 (6/15/2023) may represent some or all of the tanks in a tank battery; (3) For crude oil production facilities, the representative uncontrolled fixed roof tank shall be the front line tank (or tanks) in a tank battery that is first receiving the produced fluids (mixture of oil, water, and gases) from the crude oil production wells; (4) The stored organic liquid in each of the represented tank is the same and came from the same source; and (5) The TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D287-12b (reapproved 2019) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method) or ASTM Method D4052-18a "Standard Test Method for Density, Relative Density and API Gravity of Liquids by Digital Density meter", Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and US EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
24. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
25. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall maintain a sketch or diagram of the separator and tank system depicting the sampling location. [District Rule 4623] Federally Enforceable Through Title V Permit

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27. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
28. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate (PTO) number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The owner or operator shall maintain records of tank cleaning activities for a period of five (5) years and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
30. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. All records required to be maintained by this permit shall be maintained for a period of at least five (5) years and shall be made readily available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-472-1

EXPIRATION DATE: 05/31/2021

SECTION: SE23 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

300 BBL FIXED ROOF CONSTANT LEVEL CRUDE OIL CLARIFIER TANK WITH P/V VENT (RIPLEY TATUM LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Tank shall be operated at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall maintain monthly records of average daily crude oil throughput and shall submit such information to the APCO 30 days prior to the expiration date indicated in the Permit to Operate. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-474-1

EXPIRATION DATE: 05/31/2021

SECTION: NW7 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL FIXED ROOF PRODUCED WATER TANK STORAGE TANK #13857 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-477

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

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26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
28. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-477-2

EXPIRATION DATE: 05/31/2021

SECTION: NW 7 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL FIXED ROOF TANK WITH A COMPRESSOR, 125,000 BTU/HR HIRT-TYPE VAPOR INCINERATOR WITH LPG PILOT FUEL AND ASSOCIATED CONTROLS AND VAPOR PIPING SHARED WITH PERMIT UNITS S-1372-478, -481 AND -482

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Emissions from the vapor incinerator unit shall not exceed any of the following limits: 0.01 lb-NO_x/MMBtu, 0.0164 lb-SO_x/MMBtu, 0.0077 lb-PM₁₀/MMBtu, 0.082 lb-CO/MMBtu, or 0.011 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
28. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-478-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

2000 BBL FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-477

PERMIT UNIT REQUIREMENTS

1. VOC emission rate from vapor service components associated with tank shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
30. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from tank using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2C: Oil and Gas Production Screening Value Ranges (<10,000 ppmv) Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
31. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-479-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

19.0 MMBTU/HR NATURAL GAS/PROPANE-FIRED STEAM GENERATOR WITH GIDEON MODEL MGW-25R1 ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
8. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
10. The unit shall only be fired on PUC-regulated quality natural gas, propane, or a combination thereof. [District Rules 2201, 4320 and 4801] Federally Enforceable Through Title V Permit
11. This steam generator is not authorized to incinerate casing gas. [District Rules 2201, 4320 and 4801] Federally Enforceable Through Title V Permit
12. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. Emissions from the natural gas/propane-fired unit shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.0164 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 35 ppmvd CO @ 3% O₂ or 0.026 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, 4320 and 4801] Federally Enforceable Through Title V Permit
14. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas or propane shall be conducted within 60 days of initiating combustion of each fuel type. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas or propane shall be conducted at least once every twelve (12) months after initial source testing with that fuel type. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Permittee shall maintain daily records of the type and quantity of fuel combusted by the steam generator. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit
30. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-480-4

EXPIRATION DATE: 05/31/2021

SECTION: NW7 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 70 STEAM ENHANCED WELLS WITH OPEN CASING VENTS SERVED BY VAPOR CONTROL SYSTEM INCLUDING COMPRESSOR(S), GAS/LIQUID SEPARATOR, AND 10.4 MMBTU/HR FLARE

PERMIT UNIT REQUIREMENTS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Thermally enhanced oil recovery (TEOR) wells shall be authorized to operate with open or closed casing vents. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
4. Production from TEOR wells operated with closed casing vents shall be sent only to tanks equipped with 99% vapor control. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
5. Vapors from TEOR wells operated with open casing vents shall be sent to only to vapor control system served by a 10.4 MMBtu/hr flare. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
6. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Flare shall be equipped with total gas volume flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311 and 40 CFR 60.18(f)(2)] Federally Enforceable Through Title V Permit
9. Flare shall be equipped with a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device capable of continuously detecting at least one pilot flame or the flare flame is present. [District Rule 4311]
10. Flare shall be equipped with air assist which shall be utilized when needed to maintain visible emissions below Ringelmann 1/4 and 5% opacity. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
11. This permit shall not authorize the utilization of any IC engine, or other combustion device requiring a separate permit, for powering the air assist to the flare. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. [District Rule 4311 and 40 CFR 60.18(c)(1)] Federally Enforceable Through Title V Permit
13. Air-assisted flares shall be operated with an exit velocity less than V_{max} , as determined by the equation specified in paragraph 40 CFR 60.18 (f)(6). [District Rule 4311 and 40 CFR 60.18 (c)(5)] Federally Enforceable Through Title V Permit

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14. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [District Rule 4311 and 40 CFR 60.18 (f)(4)] Federally Enforceable Through Title V Permit
15. A flame shall be present at all times when combustible gases are vented through this flare. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
16. Flare shall only be used with the net heating value of the gas being combusted being 300 Btu/scf or greater if the flare is air-assisted or steam-assisted. [District Rule 4311 and 40 CFR 60.18 (c)(3)]
17. The net heating value of the gas being combusted in a flare shall be calculated annually, pursuant to 40 CFR 60.18(f)(3) and using EPA Method 18, ASTM D1946, and ASTM D2382. [District Rule 4311 and 40 CFR 60.18 (f)(3-6)]
18. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Section 6.5, and all commitments listed in that plan have been met. This standard does not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 4311]
19. On and after January 1, 2024, permittee shall limit flaring annual throughput to levels not to exceed 25,000 MMBtu for two consecutive calendar years. [District Rule 4311]
20. Maximum amount of gas combusted in flare shall not exceed 250 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Maximum amount of gas combusted in flare shall not exceed 91,250 MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Sulfur concentration of gas combusted in flare shall not exceed 2.66 gr S/100 scf (45 ppmv H₂S). [District Rule 2201] Federally Enforceable Through Title V Permit
23. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rules 2201 and 4801]
24. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NO_x (as NO₂): 0.068lb/MMBtu; PM₁₀: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
25. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
26. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
27. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
28. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit

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29. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
30. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
31. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
32. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
33. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
34. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit

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35. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
36. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
37. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
38. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
39. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401]
40. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
41. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
42. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
43. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
44. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit

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45. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
46. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit
47. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
48. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
49. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401]
50. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
51. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
52. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
53. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
54. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
55. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit

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56. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
57. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
58. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
59. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
60. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
61. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
62. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
63. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401]

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64. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
65. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
66. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
67. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401 (6/15/2023), Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
68. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
69. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit

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70. Permittee shall measure the sulfur content of the gas combusted by District witnessed, or authorized, sample collection by ARB certified testing laboratory at startup and annually thereafter or upon change of source of flared gas. Such data shall be submitted to the District within 60 days of sample collection. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
71. The sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H₂S and Mercaptans. H₂S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081] Federally Enforceable Through Title V Permit
72. The higher heating value of the flared gas shall be monitored at least quarterly or upon change of source of flared gas. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
73. Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits. [District Rule 2201] Federally Enforceable Through Title V Permit
74. The higher heating value (HHV) of the gas introduced into the flare shall be determined using ASTM D1826-88, ASTM 1945-81 in conjunction with ASTM D3588-89, or an alternative method approved by the District. [District Rule 4311] Federally Enforceable Through Title V Permit
75. NO_x emissions for source test purposes shall be determined using EPA Method 19 on a heat input basis, or EPA Method 3A, EPA Method 7E, or ARB 100 on a ppmv basis. [District Rule 4311] Federally Enforceable Through Title V Permit
76. VOC emissions for source test purposes shall be determined using EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case Method 25a may be used. [District Rule 4311] Federally Enforceable Through Title V Permit
77. Oxygen (O₂) concentration of flared gas shall be determined using EPA Method 3A, EPA Method 7E, or ARB 100. [District Rule 4311] Federally Enforceable Through Title V Permit
78. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311] Federally Enforceable Through Title V Permit
79. Effective on and after January 1, 2024, the operator shall monitor the vent gas flow to the flare with a flow-measuring device or other parameters as specified in this permit. The operator shall determine the heating value (Btu per cubic foot) of the vent gas annually in accordance with Section 6.3.6. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of exceeding the annual throughput thresholds in Table 2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
80. On and after January 1, 2024, if the flare exceeds the annual throughput threshold of 25,000 MMBtu for two consecutive calendar years, the operator shall notify the APCO in writing of the exceedance within 30 days following the end of the second calendar year. By April 15 of the year after the end of the second consecutive calendar year in which an exceedance of the annual throughput threshold in Table 2 occurred, the applicant shall submit an ATC application to modify or replace the flare to meet Table 3 emission limits. [District Rule 4311] Federally Enforceable Through Title V Permit

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81. The operator shall submit a flare minimization plan (FMP) to the APCO for approval. The FMP shall include, but not be limited to (1) A description and technical specifications for each flare and associated knock-out pots, surge drums, water seals and flare gas recovery systems. (2) Detailed process flow diagrams of all upstream equipment and process units venting to each flare, identifying the type and location of all control equipment. (3) A description of equipment, processes, or procedures the operator plans to install or implement to eliminate or minimize flaring and planned date of installation or implementation. (4) An evaluation of prevention measures to reduce flaring that has occurred or may be expected to occur during planned major maintenance activities, including startup and shutdown. (5) An evaluation of preventative measures to reduce flaring that may be expected to occur due to issues of gas quantity and quality. The evaluation shall include an audit of the vent gas recovery capacity of each flare system, the storage capacity available for excess vent gases, and the scrubbing capacity available for vent gases including any limitations associated with scrubbing vent gases for use as a fuel; and shall determine the feasibility of reducing flaring through the recovery, treatment and use of the gas or other means. (6) An evaluation of preventative measures to reduce flaring caused by the recurrent failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. The evaluation shall determine the adequacy of existing maintenance schedules and protocols for such equipment. For purposes of this section, a failure is recurrent if it occurs more than twice during any five year period as a result of the same cause as identified in accordance with Section 6.2.2. (7) Any other information requested by the APCO as necessary for determination of compliance with applicable provisions of this rule. [District Rule 4311] Federally Enforceable Through Title V Permit
82. Every five (5) years after the initial FMP submittal, the operator shall submit an updated FMP for each flare to the APCO for approval. The current FMP shall remain in effect until the updated FMP is approved by the APCO. If the operator fails to submit an updated FMP as required by this section, the existing FMP shall no longer be considered an approved plan. [District Rule 4311] Federally Enforceable Through Title V Permit
83. The operator of a flare subject to flare minimization requirements pursuant to Section 5.11 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7 of Rule 4311. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 of Rule 4311 shall not be required to monitor vent gas flow to the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
84. The operator shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311] Federally Enforceable Through Title V Permit
85. The operator shall submit a report including for each flaring event: (1) the date, time, and duration of the flaring event. (2) A determine the primary cause and contributing factors of the flaring event. (3) Any prevention measures considered or implemented to prevent recurrence, together with a justification for rejecting any measures that were considered but not implemented. (4) An explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility. Such records shall be retained for a period of at least five years and be made readily available for District inspection upon request. [District Rule 4311] Federally Enforceable Through Title V Permit
86. The operator shall submit an Annual Monitoring Report in an electronic format approved by the District to the APCO within 30 days following the end of each calendar year. [District Rule 4311] Federally Enforceable Through Title V Permit
87. Permittee shall keep accurate records of daily and annual heat input to the flare in MMBtu/day and MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
88. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rules 1070, 2201, 4311 and 4401] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-481-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL GAUGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-477

PERMIT UNIT REQUIREMENTS

1. VOC emission rate from vapor service components associated with the tank shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from the tank using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2C: Oil and Gas Production Screening Value Ranges (<10,000 ppmv) Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
30. This permit authorizes tank cleaning, that is not the result of breakdowns or poor maintenance, as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit
31. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-482-1

EXPIRATION DATE: 05/31/2021

SECTION: NW S7 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO THE VAPOR RECOVERY CONTROL SYSTEM LISTED ON S-1372-477 (HOYT LEASE)

PERMIT UNIT REQUIREMENTS

1. VOC emission rate from vapor service components associated with the tank shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
29. This permit authorizes tank cleaning, that is not the result of breakdowns or poor maintenance, as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit
30. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from the tank using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2C: Oil and Gas Production Screening Value Ranges (<10,000 ppmv) Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
31. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-483-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

10 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH TWO SEPARATE 5.0 MMBTU/HR LOW NOX BURNERS CONNECTED TO VAPOR CONTROL SYSTEM S-1372-480

PERMIT UNIT REQUIREMENTS

1. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. Heater treater shall only be fired on PUC-regulated natural gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Emission rates shall not exceed: NO_x (as NO_x): 9 ppmvd @ 3% O₂ or 0.011 lb-NO_x/MMBtu PM₁₀: 0.007 lb/MMBtu; CO: 50 ppmvd @ 3% O₂ or 0.037 lb-CO/MMBtu; or VOC: 0.002 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
8. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
9. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
20. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
21. Permittee shall maintain accurate records of valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts used to satisfy the fuel sulfur content analysis of fuel combusted in process heater, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
22. The permittee shall keep accurate records of the date VOC sampling occurred, who performed the sampling and testing, and the results. [District Rule 2520] Federally Enforceable Through Title V Permit
23. Permittee shall comply with all applicable testing, recordkeeping, and reporting requirements specified in Rule 4001 - New Source Performance Standards, including but not limited to Subparts A and Ja. [District Rule 4001] Federally Enforceable Through Title V Permit
24. All monitoring data, support information and records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-485-2

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

16.5 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE WITH REDUCED WASTE GAS FLOW TO NO MORE THAN 4.9 MMBTU/HR

PERMIT UNIT REQUIREMENTS

1. Capacity of flare shall not exceed 4.9 MM Btu/hr. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
2. Except for the pilot, the gas inlet to flare shall be equipped with recording flow rate meter. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
3. Operator shall demonstrate the heat input capacity of the flare daily by calculation, using the metered volume of the gas delivered to the flare and the most current measured heating value of the gas stream. Except for the pilot, heating value for the gas stream shall be determined at least once every six months by sample analysis. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1/4 or 5% opacity. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Air-assist blower shall be maintained and operated for smokeless combustion. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
6. Flare shall be equipped with continuous pilot fired solely on propane or natural gas consisting primarily of methane containing no more than 0.75 grains of total sulfur per 100 standard cubic feet of gas and no more than 5% by weight hydrocarbons heavier than butane. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
7. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311] Federally Enforceable Through Title V Permit
8. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311] Federally Enforceable Through Title V Permit
9. Pilot gas flow rate to flare shall not exceed 100 scf per hour. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
11. Open flares in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
12. Sulfur content of produced (TEOR) gas combusted shall not exceed 500 ppmv. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Emissions from this permit unit shall not exceed any of the following: PM10: 0.008 lb/MMBtu; NO_x (as NO₂): 0.068 lb/MMBtu; VOC: 0.063 lb/MMscf; or CO: 0.37 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall determine sulfur content of gas flared monthly using ASTM method D3246 or double GC for H₂S and mercaptans. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Permittee shall maintain accurate records of daily heat inputs to the flare in MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Permittee shall maintain records of monthly measurements of total sulfur content of flared gas. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. All records, including required monitoring data and support information, shall be maintained and retained for a period of 5 years and made available for inspection at any time. [District Rules 1070 and 4311] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-486-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

20 MMBTU/HR TEOR GAS AND NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE MODEL 4211-21/X1288 LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with all District Rules as authorized by an Authority to Construct. [District Rule 2010]
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
4. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
7. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
8. Steam generator shall operate only in Sections 7, 18, 19, and 20 , T11N, R23W, Section 13 T11N, R24W, Section 24 T26S R20E, Sections 14 and 15 T31S, R22E. [District Rule 4102]
9. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
10. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
11. Unit shall not operate within 2,500 feet of the nearest receptor. [District Rule 4102]
12. Steam generator shall only be fired on produced (TEOR) gas, PUC quality natural gas, or gas containing less than 50% by volume PUC quality natural gas with a sulfur content not exceeding 5.0 gr S/100 scf or scrubbed to remove 95% sulfur. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Except when the fuel is less than 50% by volume PUC quality gas and during startup and shutdown, NOx emission rates shall not exceed 9 ppmv @ 3% O2. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. When the fuel is less than 50% by volume PUC quality gas, NOx emission rates shall not exceed 12 ppmv @ 3% O2. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
15. Emission rates shall not exceed any of the following: PM10: 0.0117 lb/MMBtu, VOC: 0.008 lb/MMBtu or CO: 154 ppmvd @ 3% O2. [District Rule 2201, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
21. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after are-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. If permittee fails any compliance demonstration for NO_x and CO emissions when testing not less than once every 36 months, source testing for NO_x and CO emissions shall be conducted not less than once every 12 months. [District Rules 2520, 4305, 4606 and 4320] Federally Enforceable Through Title V Permit
29. Fuel H₂S , total sulfur, and methane content of combusted gas shall be determined whenever there is a change in fuel type and semi-annually thereafter using the test methods (or other approved methods listed in this permit) H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit
30. Permittee shall maintain records of the types (TEOR and/or PUC quality natural gas), fuel sulfur content and % volume of PUC quality natural gas, higher heating value, and quantities of fuel gas combusted each day. [District Rule 1070] Federally Enforceable Through Title V Permit
31. The following test methods shall be used : NO_x (ppmv)- EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu); EPA Method 19, CO (ppmv)- EPA Method 10 or 10B or ARB Method 100, stack gas oxygen- EPA Method 3 or 3A or ARB Method 100, SO_x (lb/MMBtu)- ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content- EPA Method 11 or 15, ASTM D3246 or double GC for H₂S and mercaptans performed in a laboratory, fuel gas hhv- ASTM 01826 or 01945 in conjunction with ASTM 03588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-487-1

EXPIRATION DATE: 05/31/2021

SECTION: 18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY (TEOR) OPERATION WITH 325 CYCLIC WELLS SERVED BY A CASING VENT VAPOR CONTROL SYSTEM WITH LIQUID KNOCKOUT(S), HEAT EXCHANGER(S), H₂S SULFA TREAT CONTACTOR VESSEL(S), AND COMPRESSOR(S) OR OPERATED WITH CLOSED CASING VENTS LOCATED IN THE EAST HALF OF SECTION 13, T11N, R24W AND SECTIONS 7, 18, 19, AND 20 T11N, R23W

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All emissions units shall always operate at least 2,900 feet away from the nearest receptor. [District Rule 4102]
3. When operated with closed casing vents production (with entrained TEOR gas) shall be sent to tanks S-1372-489 through '-498. Vapor from tank vapor control system '-489 will be scrubbed as necessary to maintain compliance with sulfur permit limits listed on steam generators '-486 and '-488, steam generator '-541, and flare '-485. [District Rule 2201] Federally Enforceable Through Title V Permit
4. When operated with open- or closed- casing vents, CVR-TEOR/TVR gas shall be scrubbed to mitigate sulfur compounds by at least 95% prior to being incinerated in Permit Units S-1372-485, '-486, '-488, and '-541; otherwise, said gas will be managed and balanced within the CVR-TEOR/TVR system and/or retention system, such as reinjection into the field. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC emissions from this casing vapor control system (CVCS) shall not exceed 0.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of the vapor processed through this operation shall not exceed 10% by weight. Permittee shall sample and record the VOC content of the vapor at least once every 12 months. The sample shall be taken on the main vapor line after all individual vapor streams are combined and prior to the sulfur scrubbers. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
7. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
8. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
9. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
10. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
12. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
13. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
14. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
15. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
16. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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17. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
18. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
19. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
20. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
21. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
23. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
24. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
25. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
26. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
28. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit
29. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
30. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
31. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
32. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
33. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
34. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
35. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 (6/15/2023) of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
36. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
37. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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38. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
39. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
40. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
41. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
42. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
43. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
44. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
45. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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46. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
47. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
48. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
49. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401, Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
50. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
51. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
52. All records shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4401] Federally Enforceable Through Title V Permit

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San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-488-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

20.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH ACT GIDEON MGW-25 LOW NOX BURNER AND INDUCED FLUE GAS RECIRCULATION OPERATED AT VARIOUS SPECIFIED LOCATIONS WITHIN THE STATIONARY SOURCE

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
4. Approved locations for this equipment: Sections 7, 8, 18, 19 and 20, T11N, R23W, Section 13, T11N, R24W, Section 15, T31S, R22E, Section 17, T29S, R21E, and Section 24, T26S, R20E. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Unit shall not be located within 1000 feet of any K-12 school. [CH&SC 42301.6]
6. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Flue gas recirculation system shall be operated at all times when steam generator is in use. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Steam generator shall be fired only on produced (TEOR) gas and/or PUC quality natural gas with a combined sulfur content not to exceed 5.0 gr-S/100 dscf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. Emissions from the steam generator shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb; NO_x/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, 0.0076 lb-PM₁₀/MMBtu, or 0.0055 lb; VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. If the unit is fired on noncertified gaseous fuel then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Copies of fuel supplier sulfur content certification, and test results to determine compliance with the conditions of this permit shall be maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Except for certified gaseous fuels, all fuel sources shall be tested for sulfur content within 30 days of using the fuel source as fuel in the steam generator and at least once every 12 months thereafter. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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22. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100 [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. 24. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of this emissions unit, or any malfunction of the air pollution control equipment. [District Rule 4001 and 40CFR60, Subpart A] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-489-1

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL WELDED FIXED ROOF WASH TANK WITH VAPOR RECOVERY SYSTEM VENTED TO THE CASING GAS GATHERING SYSTEM AND APPROVED INCINERATION DEVICES STEAM GENERATORS S-1372-486, '-488, '-541 AND/OR FLARE S-1372-485 AND SERVING TANKS S-1372-490 THROUGH '-498

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-490-1

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM
LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
28. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-491-1

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM
LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-492-1

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM
LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-493-1

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

600 BBL FWKO UNIT CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-494-1

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

107 BBL WEMCO UNIT CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-495-1

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,000 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM
LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-496-1

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

600 BBL WELDED FIXED ROOF CLARIFIER TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-497-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

500 BBL WELDED FIXED ROOF PRODUCED WATER TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-498-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

500 BBL WELDED FIXED ROOF SAND DUMP TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-499-1

EXPIRATION DATE: 05/31/2021

SECTION: 18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

85 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D3246, D4084, D4468, D6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
9. Emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.00537 lb; VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after are-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months thereafter. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit
22. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. Records of sulfur content (gr S/100 set) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-500-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

10 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO 5.0 ULTRA LOW-NOX MMBTU/HR BURNERS

PERMIT UNIT REQUIREMENTS

1. This equipment is authorized to operate at the following locations: Sec. 18, T11N, R23W and Sec. 25, T31S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Heater treater shall only be fired on produced gas, PUC-quality gas, or PUC-regulated gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit
5. Emissions shall not exceed any of the following limits: NO_x; 9 ppmvd @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.007 lb-PM₁₀/MMBtu, CO; 50 ppmvd @ 3% O₂ or 0.037 lb-CO/MMBtu, or VOC: 5 ppmv @ 3% O₂ as methane or 0.002 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
8. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
9. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Permittee shall demonstrate compliance with fuel gas sulfur content at least annually or whenever there is change in fuel gas source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
20. Fuel gas sulfur content shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Permittee shall maintain accurate records of valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts used to satisfy the fuel sulfur content analysis of fuel gas source, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-501-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

5000 BBL WASH TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-502-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

WEMCO UNIT SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit
10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-503-1

EXPIRATION DATE: 05/31/2021

SECTION: 25 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

10 MMBTU/HR GAS-FIRED C.E. NATCO M&M HEATER TREATER #3 WITH TWO 5.0 ULTRA LOW-NOX MMBTU/HR BURNERS

PERMIT UNIT REQUIREMENTS

1. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. Heater treater shall only be fired on produced gas, PUC-quality gas, or PUC-regulated gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rules 2201] Federally Enforceable Through Title V Permit
3. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit
4. Emissions shall not exceed any of the following limits: NO_x; 9 ppmvd @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.007 lb-PM₁₀/MMBtu, CO; 50 ppmvd @ 3% O₂ or 0.037 lb-CO/MMBtu, or VOC: 5 ppmv @ 3% O₂ as methane or 0.002 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
7. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
8. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; and fuel hhh (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. Permittee shall demonstrate compliance with fuel gas sulfur content at least annually or whenever there is change in fuel gas source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
19. Fuel gas sulfur content shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Permittee shall maintain accurate records of valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts used to satisfy the fuel sulfur content analysis of fuel gas source, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
21. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-504-3

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STRUTHERS STEAM GENERATOR WITH LOW NOX BURNER AND O2 CONTROLLER SERVED BY AIRPOL DUAL VALVE TRAY SOX SCRUBBER WITH CHEVRON TYPE MIST ELIMINATOR AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH S-1372-504 AND '520

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with all applicable District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit
2. While dormant, the operator shall lock out the power, drain the fluids, and blind the fuel lines of the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
4. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
7. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
8. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
9. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
11. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
12. Total fuel consumption, including TEOR gas, shall not exceed 511,000 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
14. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
15. Permittee shall install and maintain operational non-resettable, totalizing mass or volumetric flow meter(s) in the fuel (natural gas and TEOR gas) line(s) of the unit. Permittee shall determine the higher heating value (hhv) of the fuels (natural gas and TEOR gas) on a quarterly basis once per calendar quarter and whenever there is a change in the source of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Exhaust from unit shall be directed only to SO₂ scrubber authorized herein except when burning PUC regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Scrubber/wet ESP shall be in operation when combusting TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Emission rate of SO_x from S-1372-504 AND '-520 shall not exceed 262,537 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic, including sodium hydroxide and sodium carbonate. Other caustics may be used upon written District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Scrubber liquor pH shall be maintained at a pH greater than or equal to 6.0 and shall be continuously monitored. [District Rule 2201 and 40 CFR part 64] Federally Enforceable Through Title V Permit
22. Scrubber mist eliminator shall be properly cleaned and maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than 8.0 gpm/1000 acfm. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 2201] Federally Enforceable Through Title V Permit
25. When any unit connected to scrubber is burning TEOR gas, scrubber shall be operating and permittee shall demonstrate compliance with PM₁₀ and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter unless no TEOR gas has been burned since the last scrubber performance source test. Sulfur removal efficiency of scrubber shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least quarterly. [District Rule 2201] Federally Enforceable Through Title V Permit
26. When unit is operated without scrubber/wet ESP, permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content within 60 days of initiating operation without scrubber. Analyses, as approved by the APCO, provided by the gas supplier may be used to satisfy this requirement. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. When complying with PM10 and SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
28. At no time shall amount of TEOR gas introduced to this unit and all units connected to scrubber/wet ESP exceed the amount introduced during a source test demonstrating compliance with permit limits. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Emissions rates shall not exceed any of the following: NOx (as NO2): 9 ppmv @ 3% O2 or 0.011 lb/MMBtu, SOx (as SO2): 0.324 lb/MMBtu, PM10: 0.0713 lb/MMBtu, CO: 42 ppmv @ 3% O2 or 0.031 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Source testing to demonstrate compliance with PM10, SOx, NOx, and CO emission limits shall be conducted annually, except as provided below. [District Rules 2520, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Source testing to demonstrate compliance with PM10, SOx, NOx, and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, 4320] Federally Enforceable Through Title V Permit
33. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 2201] Federally Enforceable Through Title V Permit
34. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320]
35. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
37. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
38. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
39. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, sulfur oxides - ARB Methods 1-6, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
40. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

41. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
42. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, 4320] Federally Enforceable Through Title V Permit
43. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
44. Permittee shall maintain records of fuel gas and TEOR gas sulfur content, higher heating value, annual consumption in MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit
45. Permittee shall comply with all notification and recordkeeping requirements of 40 CFR 60.7 a (1)(3) and (b). [District Rule 4001] Federally Enforceable Through Title V Permit
46. Fuel gas sulfur content shall be determined using ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520] Federally Enforceable Through Title V Permit
47. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rules 2520 and 4301] Federally Enforceable Through Title V Permit
48. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520 and Kern County Rule 407] Federally Enforceable Through Title V Permit
49. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
50. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
51. When the scrubber is operating, the scrubber liquor pH shall be recorded every 15 minutes. [40 CFR part 64] Federally Enforceable Through Title V Permit
52. An excursion from the scrubber liquor pH level is defined as a daily pH reading of less than 6. Upon detecting any excursion from the acceptable pH level, the permittee shall investigate the excursion and take corrective action to restore required pH level and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

53. Records of scrubber pH monitoring equipment downtime, scrubber pH level excursions, and scrubber operation shall be maintained. [40 CFR part 64] Federally Enforceable Through Title V Permit
54. The scrubber pH sensor shall be calibrated annually. Calibration of the pH sensor shall be conducted by comparison of the sensor reading with a laboratory measurement of the scrubber recirculation fluid. [40 CFR part 64] Federally Enforceable Through Title V Permit
55. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit
56. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit
57. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit
58. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
59. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be inspected monthly for detectable leaks. Operator shall repair each leak within 15 calendar days of detection. [District Rule 2520] Federally Enforceable Through Title V Permit
60. Records of steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork monthly inspections shall be maintained. Inspection log shall contain at a minimum the following: 1) date of inspection; 2) name of inspector; 3) identification and location of leak; and 4) date when leak has been repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
61. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
62. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-505-1

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

12.6 MMBTU/HR NATURAL GAS-FIRED TRICO SUPERIOR MODEL X-4398 HEATER TREATER V-3 WITH TWO 6.3 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Only PUC regulated natural gas shall be used as fuel. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 9 ppmv NO_x (as NO₂) @ 3% O₂, 0.001 lb-SO_x/MMBtu (as SO₂), 0.005 lb-PM₁₀/MMBtu, 113 ppmv CO - @ 3% O₂, or 0.003 lb-VOC/MMBtu (7.1 ppmv @ 3% O₂) (as methane). [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
18. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520] Federally Enforceable Through Title V Permit
24. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
25. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. [District Rule 4301] Federally Enforceable Through Title V Permit
26. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [Kern County Rule 407] Federally Enforceable Through Title V Permit
27. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306 and 4320. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
28. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-506-3

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR STRUTHERS NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN LOW NOX BURNER AND FGR AUTHORIZED TO BE OPERATED AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.0085 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 42 ppmvd CO @ 3% O₂ or 0.031 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
2. This steam generator is approved for operation at the following locations: SE/4 Section 14 and SE/4 Section 15, Township 31 South, Range 22 East, and NE/4 Section 24, Township 26 South, Range 20 East, MDB&M. [District NSR Rule and CH&SC 41700] Federally Enforceable Through Title V Permit
3. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
4. This steam generator and Unit S-1372-539 shall not be operated at the same permitted location at the same time. [District Rule 2201 and CH&SC 41700] Federally Enforceable Through Title V Permit
5. Flue gas recirculation system shall be operated whenever generator is operated. [District NSR Rule] Federally Enforceable Through Title V Permit
6. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
16. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. Records of fuel gas sulfur content analysis shall be kept for a period of five years and made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
17. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 2520, 9.3.2, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. {450} Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
19. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
21. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, and 4305. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
22. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5; 4306, 5.5.5; and 4320] Federally Enforceable Through Title V Permit
24. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1; 4306, 6.1; and 4320] Federally Enforceable Through Title V Permit
25. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-507-1

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

10 MMBTU/HR NATURAL GAS-FIRED H.T.I. M&M HEATER TREATER #3 WITH TWO MAXON MODEL XPO EB ULTRA LOW NOX BURNERS OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-1372

PERMIT UNIT REQUIREMENTS

1. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
2. The Heater Treater shall not be operated within 2,500 feet of the nearest business or residence receptor. [District Rule 4102]
3. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
7. The unit shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.001 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 113 ppmvd CO @ 3% O₂ or 0.082 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit
22. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. Records of fuel gas sulfur content analysis shall be kept for a period of five years and made available for District inspection upon request. [District NSR Rule and Rule 4320] Federally Enforceable Through Title V Permit
23. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rules 4301, 5.2.1 and 4320] Federally Enforceable Through Title V Permit
24. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
25. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
26. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rules 2520, 9.3.2 and 4320, Kern County Rule 407] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201, and 4301. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
30. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-508-1

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

10 MMBTU/HR NATURAL GAS-FIRED H.T.I. HEATER TREATER #4, SA# 0392 WITH DORMANT BURNERS, FUNCTIONING AS AN EXEMPT FWKO PRESSURE VESSEL WHILE THE BURNERS ARE DORMANT

PERMIT UNIT REQUIREMENTS

1. This unit may be operated as an un-fired free water knockout vessel when it is in dormant status. Conditions 9 through 18 shall not apply while this unit is being operated as an un-fired exempt free water knockout vessel. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The burners from this equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
3. The burners from this equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rule 4320] Federally Enforceable Through Title V Permit
4. No modifications to this unit shall be performed without an Authority to Construct for such modifications, except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
5. The fuel supply line shall be physically disconnected from this unit, or an alternate method approved by the APCO shall be instituted to ensure this unit is not operated as a heater treater. [District Rule 4306] Federally Enforceable Through Title V Permit
6. This heater treater/ free water knockout vessel shall only operate at the following specified locations: NE and SE Section 15, Township 31S, Range 22E; and NE Section 24, Township 26S, Range 20E. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
7. A permanently affixed mechanical stop on the positioner shall control the inlet air butterfly valve and the natural gas supply valve such that the natural gas supply is limited to 4,762 scf/hr (equivalent to 5 MMBtu/hr) for each independent burner. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Maximum heat input of each burner shall be less than or equal to 5 million Btu per hour. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Each burner's products of combustion shall not come into contact with the products of combustion of any other burner. [District Rule 2201] Federally Enforceable Through Title V Permit
10. {450} Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
11. Emissions shall not exceed any of the following limits: 0.095 lb-NO_x/MMBtu (as NO₂) (78 ppmv @ 3% O₂), 0.001 lb-SO_x/MMBtu (6 ppmv H₂S), 0.005 lb-PM₁₀/MMBtu, 0.084 lb-CO/MMBtu (113 ppmv @ 3% O₂), or 0.003 lb-VOC/MMBtu (7 ppmv @ 3% O₂). [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
13. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
14. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 and 4301. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
18. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
19. Records of fuel gas sulfur content analysis shall be kept for a period of five years and made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-509-1

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

87.7 MMBTU/HR STRUTHERS NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE BURNER, MULTIPLE LOCATIONS - M & M GENERATOR #5

PERMIT UNIT REQUIREMENTS

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
4. Except as provided below, fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
5. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H₂S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
6. In months where PUC quality gas is combusted in this unit, the permittee shall maintain records on a calendar month basis for demonstration that the percentage by volume of PUC quality gas is less than 50% of the total gas combusted. Combustion of gas with greater than 50% by volume PUC quality gas is a violation of Rule 4320 and this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
7. Permittee shall install and maintain operational non-resettable, totalizing mass or volumetric flow meter(s) in the fuel (natural gas and TEOR gas) line(s) of the unit. Permittee shall determine the higher heating value (hhv) of the fuels (natural gas and TEOR gas) on a quarterly basis once per calendar quarter and whenever there is a change in the source of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions rates shall not exceed any of the following limits: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x: 0.00285 lb/MMBtu, PM₁₀: 0.005 lb/MMBtu, CO: 25 ppmv @ 3% O₂ or 0.0185 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
23. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rules 2520, 9.3.2 and 4320, 5.7.6.1] Federally Enforceable Through Title V Permit
24. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89 for gaseous fuels. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2 and Kern County Rule 407] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-510-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

42,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK WITH VAPOR RECOVERY SYSTEM

PERMIT UNIT REQUIREMENTS

1. {2606} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
2. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
21. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
23. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
26. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
27. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
29. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
30. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
31. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-511-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

10,500 GALLON FIXED ROOF PETROLEUM STORAGE TANK WITH VAPOR RECOVERY SYSTEM

PERMIT UNIT REQUIREMENTS

1. {2606} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
2. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
21. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
23. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
26. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
27. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
29. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
30. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
31. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-512-1

EXPIRATION DATE: 05/31/2021

SECTION: 14 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

7,560 GALLON FIXED ROOF PETROLEUM STORAGE TANK WITH VAPOR RECOVERY SYSTEM

PERMIT UNIT REQUIREMENTS

1. {2606} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
2. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
21. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
23. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
26. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
27. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
29. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
30. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
31. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-513-1

EXPIRATION DATE: 05/31/2021

SECTION: NE24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

500 BBL WASH TANK #10754 WITH VAPOR RECOVERY PIPING SHARED WITH PERMITS S-1372-514, '-515, '-516, '-518, '-531, '-537, '-538, '-540, '-546, AND '-554 (SECURITY LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank seams, welds, joints, piping, valves and fittings shall be inspected and maintained leak-free. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total organic compound content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapor control system compressor shall activate before tanks' internal pressure exceeds any pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor space pressure in tanks shall be controlled by a gas blanketing system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. PUC-quality, PUC-regulated, inert gas, produced gas or equivalent shall be used as blanketing gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Blanket gas pressure control valves shall be set to minimize tanks in-breathing and prevent tanks pressure relief valves from opening. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Collected vapors shall be discharged only to sales gas compressor listed on S-1114-103, flare S-1114-73 or boiler S-1114-124. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed any tank's pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
11. {2606} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
15. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
16. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
17. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
20. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
26. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
27. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
28. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
29. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
34. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
35. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
37. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
38. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
39. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
40. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

41. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
42. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using U.S. EPA document "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit
43. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
44. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-514-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

21,000 GALLON FIXED ROOF SHIPPING TANK #10814 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank seams, welds, joints, piping, valves and fittings shall be inspected and maintained leak-free. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total organic compound content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapor control system compressor shall activate before tanks' internal pressure exceeds any pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor space pressure in tanks shall be controlled by a gas blanketing system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. PUC-quality, PUC-regulated, inert gas, produced gas or equivalent shall be used as blanketing gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Blanket gas pressure control valves shall be set to minimize tanks in-breathing and prevent tanks pressure relief valves from opening. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Collected vapors shall be discharged only to sales gas compressor listed on S-1114-103, flare S-1114-73 or boiler S-1114-124. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed any tank's pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
11. {2606} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
15. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
16. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
17. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
20. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
26. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
27. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
28. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
29. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
34. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
35. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
37. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
38. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
39. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
40. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

41. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
42. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using U.S. EPA document "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
43. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
44. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-515-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

21,000 GALLON FIXED ROOF WASH TANK #10815 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMITS-1372-513

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank seams, welds, joints, piping, valves and fittings shall be inspected and maintained leak-free. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total organic compound content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapor control system compressor shall activate before tanks' internal pressure exceeds any pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor space pressure in tanks shall be controlled by a gas blanketing system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. PUC-quality, PUC-regulated, inert gas, produced gas or equivalent shall be used as blanketing gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Blanket gas pressure control valves shall be set to minimize tanks in-breathing and prevent tanks pressure relief valves from opening. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Collected vapors shall be discharged only to sales gas compressor listed on S-1114-103, flare S-1114-73 or boiler S-1114-124. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed any tank's pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
11. {2606} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
15. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
16. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
17. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
20. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
26. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
27. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
28. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
29. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
34. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
35. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
37. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
38. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
39. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
40. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

41. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
42. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using U.S. EPA document "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
43. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
44. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-516-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

42,000 GALLON FIXED ROOF SHIPPING TANK # 10824 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank seams, welds, joints, piping, valves and fittings shall be inspected and maintained leak-free. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total organic compound content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapor control system compressor shall activate before tanks' internal pressure exceeds any pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor space pressure in tanks shall be controlled by a gas blanketing system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. PUC-quality, PUC-regulated, inert gas, produced gas or equivalent shall be used as blanketing gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Blanket gas pressure control valves shall be set to minimize tanks in-breathing and prevent tanks pressure relief valves from opening. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Collected vapors shall be discharged only to sales gas compressor listed on S-1114-103, flare S-1114-73 or boiler S-1114-124. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed any tank's pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
11. {2606} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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14. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
15. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
16. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
17. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
20. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
26. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
27. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
28. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
29. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
34. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
35. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
37. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
38. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
39. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
40. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

41. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
42. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using U.S. EPA document "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
43. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
44. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-517-1

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION WELL VENT VAPOR CONTROL SYSTEM SERVING 711 STEAM-ENHANCED CRUDE OIL PRODUCTION WELLS

PERMIT UNIT REQUIREMENTS

1. The total number of steam drive wells included in this unit may be up to 85 wells. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit a current listing of all wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1081] Federally Enforceable Through Title V Permit
3. Non-condensable vapors shall either be incinerated in scrubbed steam generator S-1372-504, '-520 and/or '-536 or shall be disposed of in a well approved by the Division of Oil Gas and Geothermal Resources (D.O.G.G.E.R) for the disposal of well vent vapor recovery system gases. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Volatile Organic Compound (VOC) emission rate shall not exceed 247.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Collected liquids shall be handled, stored, and disposed of in a manner preventing air contaminant emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
6. When steam generator is used for waste gas disposal permittee shall maintain daily records of waste gas volume and quarterly records of waste gas sulfur content [District Rule 1081] Federally Enforceable Through Title V Permit
7. Compliance with permit conditions in the Title V permit shall be deemed in compliance with District Rule 1081 (Amended December 16, 1993). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. The well vent vapor control system listed on this permit may receive vapors from other Chevron USA Inc's TEOR system listed on PTO S-1141-250 and from Sentinel Peak Resources TEOR systems listed on PTOs S-1372-74, '76, '77 and '387. [District Rule 2201] Federally Enforceable Through Title V Permit
9. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
10. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
11. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
13. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
14. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
15. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
16. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
17. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
18. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit

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19. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
20. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
21. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
22. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
23. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
24. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
25. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
26. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
27. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
28. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit

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29. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
30. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit
31. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
32. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
33. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
34. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
35. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
36. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rules 2201, 2520, and 4401] Federally Enforceable Through Title V Permit
37. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
38. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
39. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit

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40. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
41. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
42. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
43. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
44. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
45. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
46. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
47. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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48. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
49. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
50. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
51. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401, Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
52. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
53. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
54. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 4401] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-518-1

EXPIRATION DATE: 05/31/2021

SECTION: NE24 **TOWNSHIP:** 26 **RANGE:** 20

EQUIPMENT DESCRIPTION:

1,000 BARREL FIXED-ROOF CRUDE OIL STORAGE TANK VENTING TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank seams, welds, joints, piping, valves and fittings shall be inspected and maintained leak-free. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total organic compound content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapor control system compressor shall activate before tanks' internal pressure exceeds any pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor space pressure in tanks shall be controlled by a gas blanketing system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. PUC-quality, PUC-regulated, inert gas, produced gas or equivalent shall be used as blanketing gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Blanket gas pressure control valves shall be set to minimize tanks in-breathing and prevent tanks pressure relief valves from opening. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Collected vapors shall be discharged only to sales gas compressor listed on S-1114-103, flare S-1114-73 or boiler S-1114-124. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed any tank's pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
11. {2606} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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14. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
15. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
16. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
17. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
20. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
26. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
27. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
28. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
29. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
34. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
35. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
37. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
38. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
39. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
40. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

41. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
42. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using U.S. EPA document "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
43. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
44. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-519-2

EXPIRATION DATE: 05/31/2021

SECTION: NE24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

20 MMBTU/HR FLARE, 3 IN DIA X 12 FT TALL, WITH REDUCED WASTE GAS FLOW TO NO MORE THAN 4.9 MMBTU/HR, SERVING PRIMARY PRODUCTION WELL VENT VAPOR CONTROL SYSTEM, TANK BATTERY '-513 VAPOR CONTROL SYSTEM, & TEOR WELL VENT VAPOR CONTROL SYSTEM '-530 (STAR LEASE)

PERMIT UNIT REQUIREMENTS

1. Capacity of flare shall not exceed 4.9 MMBtu/hr. [District Rules 2201 and 4311]
2. Except for the pilot, each gas inlet to flare shall be equipped with recording flow rate meter. [District Rules 2201 and 4311]
3. Operator shall demonstrate the heat input capacity of the flare daily by calculation, using the metered volume of the gas delivered to the flare and the most current measured heating value of the gas stream. Except for the pilot, heating value for the gas stream shall be determined at least once every six months by sample analysis. [District Rule 2201 and 4311]
4. Emission rates shall not exceed the following: PM₁₀: 0.0202 lb/MMBtu, NO_x (as NO₂): 0.068 lb/MMBtu, VOC: 0.0210 lb/MMBtu, and CO: 0.37 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Sulfur content of gases burned in flare shall not exceed 303.7 gr/100 Scf as total sulfur. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Gas sulfur content and higher heating value shall be measured quarterly using gas chromatographic analysis to calculate SO_x emission rate. Test reports of measured fuel sulfur content and higher heating value shall be maintained. The calculated SO_x emission rate shall be recorded in format approved by the District. If compliance with the SO_x emission rate has been demonstrated for 8 consecutive quarters for a fuel source, then the testing frequency shall be annually. If an annual fuel sulfur content and higher heating value testing fails to show compliance, quarterly testing shall resume [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. The permittee shall keep accurate daily records of volume of gas flared for a period of five years, and shall make such records available for District inspection upon request. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. Flares shall be designed for and operated with no visible emissions except for periods not to exceed a total of three (3) minutes in any one (1) hour. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit
9. The flare shall be inspected quarterly during operation for visible emissions, using EPA Method 22. If visible emissions are observed, corrective action shall be taken. If visible emissions cannot be eliminated, an EPA Method 9 test shall be conducted within 24 hours. [2520, 9.3.2] Federally Enforceable Through Title V Permit
10. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
11. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
13. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
14. The requirements of SJVAPCD District Rule 4101 (Amended November 15, 2001) are addressed in a previous permit condition. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
15. The requirements of SJVAPCD District Rule 4311 (as amended June 18, 2009) are addressed in this permit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-520-1

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL/TEOR GAS FIRED STEAM GENERATOR (CUSA ID # 50-1-15A, DIS# 43005-78) WITH FLUE GAS RECIRCULATION, O2 CONTROLLER AND SO2 SCRUBBER AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH UNIT S-1372-504

PERMIT UNIT REQUIREMENTS

1. {450} Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
2. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made in writing no later than 48 hours after starting operation at the location. [District Rule 1070 and Kern County Rule 107] Federally Enforceable Through Title V Permit
4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
5. When operating at NE15, T31S/R22E, scrubber shall be used when burning TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
7. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually and whenever the fuel is switched from PUC-quality to non PUC-quality natural gas and from non PUC-quality to PUC-quality natural gas, using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
8. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emission rates of SO_x for units S-1372-504 and -520 shall not exceed 262,537 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Except as set for below, emissions rates shall not exceed any of the following: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x (as SO₂): 0.324 lb/MMBtu, PM₁₀: 0.0713 lb/MMBtu, CO: 29 ppmv @ 3% O₂ or 0.021 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. When fired on PUC-quality natural gas, the NO_x emissions rate shall not exceed (as NO₂): 7 ppmv @ 3% O₂ or 0.008 lb/MMBtu. [District Rule 4320] Federally Enforceable Through Title V Permit
12. At no time shall TEOR gas introduced to this unit and all units connected to scrubber exceed the amount introduced during a source test demonstrating compliance with permit limits. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months, or whenever the fuel is switched from PUC-quality to non PUC-quality natural gas or from non PUC-quality to PUC-quality natural gas; or whenever the FGR is switched to, or from, open to closed. After demonstrating compliance, in an operating mode, on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, sulfur oxides - ARB Methods 1-6, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Permittee shall maintain records of fuel gas and TEOR gas sulfur contents and annual consumption of each. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be inspected monthly for detectable leaks. Operator shall repair each leak within 15 calendar days of detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. Records of steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork monthly inspections shall be maintained. Inspection log shall contain at a minimum the following: 1) date of inspection; 2) name of inspector; 3) identification and location of leak; and 4) date when leak has been repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. Fuel gas sulfur content shall be determined using ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. [District Rule 4301] Federally Enforceable Through Title V Permit
30. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [Kern County Rule 407] Federally Enforceable Through Title V Permit
31. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic, including sodium hydroxide and sodium carbonate. Other caustics may be used upon written District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
35. When the scrubber is operating, scrubber liquor shall be maintained at a pH greater than or equal to 6.0 and shall be continuously monitored. [40 CFR part 64] Federally Enforceable Through Title V Permit
36. When the scrubber is operating, the scrubber liquor pH shall be recorded every 15 minutes. [40 CFR part 64] Federally Enforceable Through Title V Permit
37. An excursion from the scrubber liquor pH level is defined as a daily pH reading of less than 6. Upon detecting any excursion from the acceptable pH level, the permittee shall investigate the excursion and take corrective action to restore required pH level and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. Records of scrubber pH monitoring equipment downtime, scrubber pH level excursions, and scrubber operation shall be maintained. [40 CFR part 64] Federally Enforceable Through Title V Permit
39. The scrubber pH sensor shall be calibrated annually. Calibration of the pH sensor shall be conducted by comparison of the sensor reading with a laboratory measurement of the scrubber recirculation fluid. [40 CFR part 64] Federally Enforceable Through Title V Permit
40. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit
41. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit
42. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit
43. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
44. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
45. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
46. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-521-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF FREE WATER KNOCKOUT TANK T-1 W/VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER, LIQUID KNOCKOUT VESSELS, & VAPOR COMPRESSOR WITH PIPING TO STEAM GENERATOR S-1372-520, HEATER TREATERS S-1372-525 AND '-526, AND SERVING TANKS S-1372-521, '-522, '-523, '-524, '-527, '-528, '-529, '-533, '-534, AND '-535, AND WEMCO S-1372-549 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
5. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
6. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
15. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
16. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
21. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
23. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-522-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL LACT TANK #T-2 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
5. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
6. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
15. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
16. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
21. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
23. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-523-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL SLOP TANK #T-4 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
2. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
3. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-524-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL WASTEWATER TANK #T-5 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
5. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
6. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
15. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
16. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
21. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
23. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-525-2

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

12.3 MMBTU/HR NATURAL GAS-FIRED NATCO MODEL VFH-RM, SERIAL NO. ELIN22901-01 HEATER TREATER V-1 WITH TWO 6.15 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS WITH VAPOR RECOVERY PIPING TO S-1372-521

PERMIT UNIT REQUIREMENTS

1. Only natural gas with a maximum sulfur content of 0.2 grain/100 scf shall be used as fuel or make up gas. [District Rule 2201 & 4320] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed any of the following limits: 9 ppmv-NOx @ 3% O2, 0.005 lb-PM10/MMBtu, 250 ppmv CO @ 3% O2, or 0.003 lb-VOC/MMBtu (7.1 ppmv @ 3% O2) (as methane). [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
3. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
4. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
5. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
6. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

7. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
8. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted every twelve (12) months. After demonstrating compliance on two (2) consecutive source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. {450} Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
18. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
19. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
20. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 4305, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
23. Permittee shall maintain records of fuel gas sulfur content analysis and annual fuel use. [District Rule 2201] Federally Enforceable Through Title V Permit
24. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 1070]
25. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305 and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
26. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
27. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-526-1

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

12.3 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER V-2 WITH TWO 6.15 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS WITH VAPOR RECOVERY PIPING TO S-1372-521

PERMIT UNIT REQUIREMENTS

1. Only natural gas with a maximum sulfur content of 0.2 grain/100 scf shall be used as fuel or make up gas. [District Rules 2201 & 4320] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed any of the following limits: 9 ppmv-NO_x @ 3% O₂, 0.005 lb-PM₁₀/MMBtu, 250 ppmv CO @ 3% O₂, or 0.003 lb-VOC/MMBtu (7.1 ppmv @ 3% O₂) (as methane). [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
3. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
4. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
5. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
6. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

7. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
8. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted every twelve (12) months. After demonstrating compliance on two (2) consecutive source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. {450} Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
18. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
19. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rule 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
20. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 4305, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
23. Permittee shall maintain records of fuel gas sulfur content analysis and annual fuel use. [District Rule 2201] Federally Enforceable Through Title V Permit
24. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 1070]
25. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305 and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
26. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
27. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-527-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

WEMCO AIR FLOTATION UNIT #W-1 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
5. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
6. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
9. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
15. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
16. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
19. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
21. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
23. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-528-1

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL SUMP REPLACEMENT TANK #T-9 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
16. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
17. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-529-1

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL SUMP REPLACEMENT TANK #T-10 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521
(MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
16. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
17. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-530-1

EXPIRATION DATE: 05/31/2021

SECTION: NE24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

20 STEAM ENHANCED CRUDE OIL PRODUCTION WELLS, AND THERMALLY ENHANCED OIL RECOVERY OPERATION AND WELL-VENT VAPOR CONTROL SYSTEM INCLUDING SEPARATORS, COLLECTORS, COOLERS, AND COMPRESSORS

PERMIT UNIT REQUIREMENTS

1. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
2. VOC content of well vent vapor gas shall not exceed 10% by weight. If the VOC content of the well vent vapor gas is less than 10% by weight for 8 consecutive quarterly samplings per District approved plan, sampling frequency shall only be required annually. Permittee shall conduct quarterly gas sampling immediately downstream of the initial compressor. If gas samples are 10% VOC by weight or less for 8 consecutive quarterly samplings, sampling shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Collected vapors shall be sent to the sales gas line, incinerated in flare S-1372-519, or injected into the formation. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Injection of collected vapors shall only be performed using Department of Oil, Gas & Geothermal (DOGGR) approved injection wells. Permittee shall make copies of DOGGR approval for injection wells and make such documentation readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Permittee shall cease injecting vapors and notify the District immediately if DOGGR injection approval is revoked, denied, terminated, surrendered or altered to disallow injection. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall inspect all components on a quarterly basis for leaks, using the inspection procedures contained in Rule 4401. Any component found to be leaking shall be reinspected within 30 days after it is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Permittee shall maintain with the permit a listing (updated annually within 60 days of permit anniversary) of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Compliance with permit conditions in the Title V permit shall be deemed in compliance with District Rule 1081(as amended December 16, 1993). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
10. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
12. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
13. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
14. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
15. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
16. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
17. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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18. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
19. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit
20. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
21. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
22. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
23. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
24. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
25. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
26. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
27. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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28. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
29. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
30. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
31. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit
32. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
33. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
34. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
35. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
36. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
37. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
38. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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39. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
40. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
41. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
42. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
43. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
44. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
45. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
46. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
47. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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48. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
49. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
50. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
51. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
52. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401, Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
53. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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54. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4401] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-531-1

EXPIRATION DATE: 05/31/2021

SECTION: NE 24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

3,300 BARREL LACT TANK WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
6. {2606} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

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10. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
14. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

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19. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
22. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The control efficiency of any VOC destruction device shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
25. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
32. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using U.S. EPA publication 453/R-95-17, Table 2-4. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
37. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-533-1

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
16. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
17. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-534-1

EXPIRATION DATE: 05/31/2021

SECTION: NE 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
16. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
17. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-535-1

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521

PERMIT UNIT REQUIREMENTS

1. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
2. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
3. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
4. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Tank vapors shall be disposed of only by injection in DOGGR approved gas disposal well(s). [District Rule 4623] Federally Enforceable Through Title V Permit
6. Permittee shall submit copies of DOGGR approval of gas disposal well(s) prior to injection. [District Rule 4623] Federally Enforceable Through Title V Permit
7. {2606} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 99%. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
12. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
13. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
16. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
17. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
22. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
24. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
26. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
27. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
29. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
30. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2520 and 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
34. {2607} Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 4623 (Amended December 20, 2001). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-536-4

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

77.6 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with all applicable District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
4. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
7. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
8. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
9. The equipment shall not be located within 1,000 feet of any K-12 school nor 1,000 feet of any residence or business. [District Rule 4102]
10. The operator shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1081] Federally Enforceable Through Title V Permit
11. Permittee shall determine the higher heating value (hhv) of the fuel at least once per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Emissions rates shall not exceed any of the following: NO_x (as NO₂): 7 ppmv @ 3% O₂ or 0.008 lb/MMBtu, SO_x (as SO₂) 0.00285 lb/MMBtu, PM₁₀: 0.0076 lb/MMBtu, CO: 42 ppmv @ 3% O₂ or 0.031 lb/MMBtu, or VOC: 0.0055 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of fuel gas sulfur content and higher heating value. [District Rule 2201] Federally Enforceable Through Title V Permit
28. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-537-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total hydrocarbon content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
28. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
34. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
35. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-538-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. VOC fugitive emissions from the components in gas service on tank shall not exceed 1.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total hydrocarbon content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
28. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
34. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
35. {2607} Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 4623 (Amended December 20, 2001). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
36. {2608} This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-539-3

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A NORTH AMERICAN LOW-NOX LEL BURNER
AUTHORIZED TO BE OPERATED AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. The equipment shall not be located within 1,000 feet of any K-12 school nor 1,000 feet of any residence or business. [District Rule 4102]
3. The operator shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.0085 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 42 ppmvd CO @ 3% O₂ or 0.031 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. This steam generator and Unit S-1372-50 shall not be operated at the same permitted location at the same time. [District Rule 2201 and CH&SC 41700] Federally Enforceable Through Title V Permit
6. Flue gas recirculation system shall be operated whenever generator is operated. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
8. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
10. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
12. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
13. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
14. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. Records of fuel gas sulfur content analysis shall be kept for a period of five years and made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
18. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. {450} Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
20. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
22. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, and 4305. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
23. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. {5026} Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-540-1

EXPIRATION DATE: 05/31/2021

SECTION: NE24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

107 BBL WEMCO MODEL 66 DEPURATOR WITH VAPOR PIPING TO SHARED VAPOR RECOVERY SYSTEM LISTED ON TANK PERMIT S-1372-513 (SECURITY LEASE)

PERMIT UNIT REQUIREMENTS

1. The vapor space of the Wemco unit shall be connected to the vapor recovery system listed on S-1114-54 by a system that is constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This Wemco unit shall be maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Fugitive VOC emissions from the Wemco unit shall not exceed 0.3 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total organic compound content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 99% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
8. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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19. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
21. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
23. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
25. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
27. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
28. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
31. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
32. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
33. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit
34. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-541-2

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

85 MMBTU/HR PCL NATURAL GAS AND WASTE GAS-FIRED STEAM GENERATOR, WITH NORTH-AMERICAN LEL ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION AUTHORIZED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. This unit shall be equipped with horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input. [Public Resources Code 21000-21177: California Environmental Quality Act]
2. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [Public Resources Code 21000-21177: California Environmental Quality Act]
3. Steam generator shall be equipped with operational fuel gas and waste gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Only natural gas or a combination of natural gas and waste gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grain of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0061 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 42 ppmvd CO @ 3% O₂ or 0.031 lb-CO/MMBtu, or 0.00537 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. This steam generator is approved for operation at the following locations: NE/4 Section 18, NE/4 Section 19 and NW/4 Section 20, Township 11 North, Range 23 West; NE/4 Section 15, Township 31 South, Range 22 East; and NE/4 Section 24, Township 26 South, Range 20 East, MDB&M. [District Rule 4201] Federally Enforceable Through Title V Permit
13. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
14. Flue gas recirculation system shall be operated whenever generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. When the unit changes fuel source, the unit shall undergo source testing to measure NOx and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. The following test methods shall be used: SOx emissions - EPA Method 6C, EPA Method 8, or ARB Method 100; Total Sulfur as Hydrogen Sulfide (H2S) content - EPA Method 11 or EPA Method 15. [District Rules 2520 and 4320] Federally Enforceable Through Title V Permit
30. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
31. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rules 2520 and 4301] Federally Enforceable Through Title V Permit
32. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520 and Kern County Rule 407] Federally Enforceable Through Title V Permit
33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
34. Permittee shall maintain a record of the duration of each startup and shutdown of this unit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. Documentation showing that this unit is equipped with a horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input and equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump shall be retained on site. [Public Resources Code 21000-21177: California Environmental Quality Act]
37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-542-1

EXPIRATION DATE: 05/31/2021

SECTION: NE 24 **TOWNSHIP:** 24S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

3.0 MMBTU/HR LEASE GAS-FIRED PROCESS HEATER/BOILER WITH ECLIPSE WINNOX WX0300 LOW NOX
BURNER - STAR SECURITY LEASE

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
4. The owner/operator shall monitor, at least once a month, the operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit
5. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. [District Rule 4307] Federally Enforceable Through Title V Permit
6. In lieu of tuning the unit twice each calendar year, the owner/operator shall monitor the emissions with a portable NO_x analyzer at least twice each calendar year and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit
7. This unit shall be fired only on gas with a sulfur content not exceeding 5 grains/100 dscf, or 80 ppmv. [District Rules 2201 and 4307] Federally Enforceable Through Title V Permit
8. Except for periods of startup and shutdown, emissions shall not exceed any of the following limits: NO_x: 30 ppmvd @ 3% O₂ or 0.036 lb-NO_x/MMBtu; 0.0076 lb-PM₁₀/MMBtu; CO: 400 ppmv @ 3% O₂ or 0.296 lb-CO/MMBtu; VOC: 13 ppmv (as methane) @ 3% O₂ or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4307] Federally Enforceable Through Title V Permit
9. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rule 4307] Federally Enforceable Through Title V Permit
11. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4307] Federally Enforceable Through Title V Permit
12. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4307] Federally Enforceable Through Title V Permit
13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 4307] Federally Enforceable Through Title V Permit
14. The owner/operator shall maintain records to verify that the required monitoring of the operational characteristics, and tune-ups or portable NO_x analyzing has been performed. [District Rule 4307] Federally Enforceable Through Title V Permit
15. Tune-up records shall include: 1) date of tune-up, 2) name of technician performing tune-up, and 3) reason that they are qualified. [District Rule 4307] Federally Enforceable Through Title V Permit
16. Portable analyzer records shall include: 1) date of emissions analyzing, 2) results of emissions analyzing, 3) name of technician performing analyzing, 4) make and model of analyzer, 5) date of last calibration of the analyzer, and 6) a description of any adjustments made to the unit's operating parameters for the purposes of assuring compliance. [District Rule 4307] Federally Enforceable Through Title V Permit
17. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 4307] Federally Enforceable Through Title V Permit
18. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rules 2201 and 4307] Federally Enforceable Through Title V Permit
19. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-543-1

EXPIRATION DATE: 05/31/2021

SECTION: NW19 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

85 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. The steam generator shall be operated at one of the following locations within Seneca Resource's Heavy Oil Western Stationary Source: SE/4 Section 25, T31S, R22E; NW/4 and NE/4 Section 19, T11N, R23W. [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
9. Emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.00537 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit
22. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-544-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK #T-3 CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
6. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
19. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-545-2

EXPIRATION DATE: 05/31/2021

SECTION: NE17 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0061 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.0054 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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20. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
21. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Permittee shall submit notification to the District of the date of construction, anticipated startup, and actual startup. Notifications shall be postmarked no later than 30 days after construction and 15 days after actual startup. The notifications shall include the design heat input and identification of fuels for this permit unit. [40 CFR 60.48c (a)] Federally Enforceable Through Title V Permit
26. Permittee shall maintain daily records of the type and quantity of fuel combusted by the steam generator. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
27. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-546-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3,300 BBL FIXED ROOF CRUDE OIL LACT TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON TANK S-1372-521

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank seams, welds, joints, piping, valves and fittings shall be inspected and maintained leak-free. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total organic compound content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623 or shall send collected vapors to the field gas pipeline system. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
8. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
9. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
13. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
20. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
21. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
22. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
23. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
25. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
26. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
28. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
29. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
30. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
32. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
33. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
34. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using U.S. EPA document "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-547-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

750 BBL FIXED ROOF HOT PRODUCED WATER TANK T-8 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-521

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
16. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
17. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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19. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
20. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
24. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
25. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
27. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
29. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
30. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
31. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
32. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-548-1

EXPIRATION DATE: 05/31/2021

SECTION: 17 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

100 STEAM-ENHANCED CRUDE OIL PRODUCTION WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. Casing vent valves shall be closed and plugged. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All components to be screened shall be identified and categorized according to the following equipment types: connectors, flanges, open-ended lines (sample connections, drains, bleed valves, etc.), pump seals, valves and other (pressure relief devices, compressor seals, meters, etc.). [District Rule 2201] Federally Enforceable Through Title V Permit
3. Fugitive VOC emissions from components in vapor and condensate service shall not exceed 53.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall maintain with the permit accurate fugitive component counts of components in gas service and resulting emissions calculated using the emission factors in the USEPA's 1995 Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017) Oil and Gas Production Operations Average Emissions Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain with the permit an accurate, current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
6. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407] Federally Enforceable Through Title V Permit
7. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
8. The requirements of District Rule 4401 shall not apply to components serving the produced fluid line. [District Rule 4401] Federally Enforceable Through Title V Permit
9. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds any of the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv to 50,000 ppmv as methane for all components; and 2) A minor gas leak is a detection of 400 ppmv to 10,000 ppmv as methane for pressure relief devices (PRDs) and 500 to 10,000 for components other than PRDs (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit
10. A major liquid leak is defined as a visible mist or a continuous flow of liquid that is not seal lubricant and a minor liquid leak is defined as a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute (6/15/23). [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in District Rule 4401. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
12. An operator shall be in violation of District Rule 4401 if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to District Rule 4401 demonstrates that one or more of the following conditions exist at the facility: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak as defined in District Rule 4401; 3) Existence of a component with a gas leak greater than 50,000 ppmv; 4) Existence of a component leak described in excess of the following allowable number of leaks as specified in Table 4 of District Rule 4401: 1 to 5 steam-enhanced crude oil production wells connected to a VOC collection and control system - 0 allowable leaks, 6 to 25 steam-enhanced crude oil production wells connected to a VOC collection and control system - 3 allowable leaks, 26 to 50 steam-enhanced crude oil production wells connected to a VOC collection and control system - 6 allowable leaks, 51 to 100 steam-enhanced crude oil production wells connected to a VOC collection and control system - 8 allowable leaks, 101 to 250 steam-enhanced crude oil production wells connected to a VOC collection and control system - 10 allowable leaks, 251 to 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 15 allowable leaks, more than 500 steam-enhanced crude oil production wells connected to a VOC collection and control system - 1 allowable leak for each 20 wells tested with a minimum of 50 wells tested. Leaks counted toward the allowable leaks are still subject to component repair requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
13. The operator shall not use any component with a leak as defined in this permit, or that is found to be in violation of the provisions of the Leak Standards of District Rule 4401 (6/15/2023), Section 5.2.2. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in this permit. [District Rule 4401] Federally Enforceable Through Title V Permit
14. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
15. An operator shall comply with the requirements of Section 6.7 of Rule 4401 (6/15/2023) if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
16. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components for leaks pursuant to the requirements of this permit at least once every calendar quarter. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. The operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
18. The operator shall inspect for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service as follows: The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of District Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the following timeframes: 1) Minor gas leaks shall be repaired within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv shall be repaired within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv shall be repaired within 1 calendar day of initial detection; 4) Minor liquid leaks shall be repaired within 3 calendar days of initial detection; 5) Major liquid leaks shall be repaired within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
19. The operator shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. The operator shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401] Federally Enforceable Through Title V Permit
20. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401] Federally Enforceable Through Title V Permit
21. Except for PRDs that released to the atmosphere, the operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
23. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
24. The operator shall affix a readily visible weatherproof tag to all leaking components upon detection of the leak. The following information shall be included on the tag: 1) The date and time of leak detection; 2) The date and time of leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) Whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
25. The operator shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
26. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. Except for leaking critical components or leaking essential components, if an operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC collection and control system as defined in District Rule 4401, or 3) Remove the leaking component from operation. The operator shall comply with one of these requirements as soon as practicable but not later than the following timeframes: 1) Minor gas leaks - comply within 14 calendar days of initial detection; 2) Major gas leaks less than or equal to 50,000 ppmv - comply within 5 calendar days of initial detection; 3) Gas leaks greater than 50,000 ppmv - comply within 1 calendar day of initial detection; 4) Minor liquid leaks - comply within 3 calendar days of initial detection; 5) Major liquid leaks - comply within 1 calendar day of initial detection. [District Rule 4401] Federally Enforceable Through Title V Permit
28. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in District Rule 4401, Table 6 (6/15/2023) . [District Rule 4401] Federally Enforceable Through Title V Permit
29. The time of the initial leak detection shall be the start of the repair period specified in District Rule 4401, Table 6 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
30. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of District Rule 4401, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
31. If a leaking component requires rig-up operation to complete repair, an extended repair period may be granted for up to 30 calendar days from initial leak detection under the following conditions: 1) The operator shall provide written notification to the District within the compliant repair period. Notification shall include the following: a) The Permit to Operate (PTO) number and physical location of the well being repaired, b) The date and time the component was found to be leaking and the leak concentration, c) Proof that equipment or other required services necessary to make the repairs have been ordered or scheduled; and 2) The operator shall submit a written notification to the District within seven (7) calendar days of completing the repairs and re-inspecting the component using the test method listed in this permit. Operators who fail to comply with all of the requirements specified in this condition shall be in violation with the provisions of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
32. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
33. Unless source testing is not required, an operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401] Federally Enforceable Through Title V Permit
34. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
35. The operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401 (6/15/2023). [District Rule 4401] Federally Enforceable Through Title V Permit
36. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
37. Operator shall keep a list of all gauge tanks, as defined in District Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. The operator shall comply with the following requirements for each gauge tank, as defined in District Rule 4401. The operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The results of gauge tank TVP testing shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
39. If the operator discovers that a PRD has released, the operator shall record the date that the release was discovered, and the identity and location of the PRD that released. The operator shall submit such information recorded during the calendar year of the release to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
40. The operator shall source test all VOC collection and control systems used to control emissions from steam-enhanced crude oil production well vents each calendar year to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed at least each calendar year by source testers certified by the California Air Resource Board (ARB). Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
41. If approved by the APCO, a VOC collection and control system is not subject to source testing if all uncondensed VOC emissions collected by the system are controlled by a device meeting one of the following: 1) An internal combustion engine subject to District Rule 4702 (Internal Combustion Engines); or 2) A combustion device subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr); District Rule 4307 (Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr); or District Rule 4308 (Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to 2.0 MMBtu/hr); or 3) A unit subject to District Rule 4311 (Flares). [District Rule 4401] Federally Enforceable Through Title V Permit
42. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
43. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
44. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
45. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

46. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
47. The operator shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
48. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Copies of the training records of the training program shall be maintained at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
49. The operator shall prepare and submit an Operator Management Plan (OMP) for approval by the APCO. The operator may use diagrams, charts, spreadsheets, or other methods approved by the APCO to describe the information required in the Operator Management Plan. The Operator Management Plan shall include, at a minimum, all of the following information: 1) A description of all wells and all associated VOC collection and control systems subject to District Rule 4401, and all wells and all associated VOC collection and control systems that are exempt from District Rule 4401; 2) Identification and description of any known hazard that might affect the safety of an inspector; 3) Except for pipes, the number of components that are subject to District Rule 4401 by component type; 4) Except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to District Rule 4401 and the reason(s) for such designation; 5) Except for pipes, the location of components subject to District Rule 4401 (components may be grouped together functionally by process unit or facility description); 6) Except for pipes, components exempt pursuant to District Rule 4401, Section 4.6 (except for components buried below ground) may be described in the Operator Management Plan by grouping them functionally by process unit or facility description. The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed shall be submitted with the Operator Management Plan; 7) A detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by District Rule 4401 will be performed by a qualified contractor or by an in-house team; 8) A description of the training standards for personnel that inspect and repair components; and 9) A description of the leak detection training for conducting the test method specified for new operators, and for experienced operators, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
50. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
51. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-549-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

WEMCO UNIT WITH VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-521

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-550-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL FREEWATER KNOCKOUT (FWKO) VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-1372-517

PERMIT UNIT REQUIREMENTS

1. The FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the FWKO and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to the vapor control system listed on S-1372-517. Vapor control system shall have a minimum control efficiency of 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
2. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
16. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
17. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. For crude oil with an API gravity of 26 degrees or less, TVP shall be measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
20. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
22. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
23. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
24. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
25. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
28. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
30. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-551-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1,200 BBL FREEWATER KNOCKOUT (FWKO) VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-1372-517

PERMIT UNIT REQUIREMENTS

1. The FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the FWKO and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to the vapor control system listed on S-1372-517. Vapor control system shall have a minimum control efficiency of 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
2. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
16. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
17. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. For crude oil with an API gravity of 26 degrees or less, TVP shall be measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
20. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
22. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
23. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
24. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
25. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
28. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
30. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-552-1

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL FREEWATER KNOCKOUT (FWKO) VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-1372-517

PERMIT UNIT REQUIREMENTS

1. The FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the FWKO and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to the vapor control system listed on S-1372-517. Vapor control system shall have a minimum control efficiency of 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
2. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
10. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit
16. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
17. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. For crude oil with an API gravity of 26 degrees or less, TVP shall be measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
20. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
22. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
23. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
24. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
25. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
26. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
28. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
29. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
30. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-554-1

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK #10841 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMIT S-1372-513 (SECURITY LEASE)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
2. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Maximum VOC content of vapor in the tank vapor space and vapor control system piping shall not exceed 68% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission Factors. Permittee shall update such records when new components are approved and installed. [District Rules 2201] Federally Enforceable Through Title V Permit
5. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. To facilitate connection to an external APCO-approved vapor recovery system a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
8. A leak-free condition is a condition without a gas leak (minor or major) or a liquid leak. A minor gas leak is defined as a reading in excess of 500 ppmv to 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A major gas leak is defined as a reading greater than 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. During a District inspection, a facility shall be considered in violation of District Rule 4623 if one or more of the following conditions exist at the facility: 1) The discovery of a major gas leak greater than 10,000 ppmv; 2) The discovery of a liquid leak as defined in Rule 4623; 3) Exceeding five minor leaks when 200 or fewer components are inspected; 4) Minor leaks exceeding 2% of the components inspected when more than 200 components are inspected, as specified in Rule 4623, Table 10; or 5) Failure to repair leaks within the timeframes specified in Rule 4623. The maximum number of allowable leaks as defined in Rule 4623, Table 10 shall be rounded upwards to the nearest integer, where required. The maximum allowable percent of leaks is calculated from the total number of components inspected during the specified inspection period. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, operator shall repair the liquid leak within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a minor gas leak, operator shall repair the minor gas link within 14 calendar days. Upon detection of a major gas leak, operator shall repair the major gas link within 2 calendar days. [District Rule 4623] Federally Enforceable Through Title V Permit
12. At least once each calendar quarter all components shall be tested for leaks of total hydrocarbons in ppmv in accordance with US EPA Reference Method 21, except for inaccessible components, unsafe to monitor components, and floating roof tanks including their deck fittings and components. Inaccessible components and unsafe-to-monitor components shall be inspected once every 12 months using US EPA Reference Method 21. External floating roof tanks shall be inspected once every 12 months. Internal floating roof tanks shall be inspected once every 60 months. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Except for inaccessible components, unsafe to monitor components, and floating roof tanks including deck fittings and components, owners or operators shall audio-visually inspect (by hearing and by sight) all hatches, pressure-vacuum relief valves, pressure relief devices, and pump seals for leaks or indications of leaks at least once every 24 hours for facilities that are visited daily, or at least once per calendar week for facilities that are not visited at least once every 24 hours. Any audio-visual inspection that indicates a leak shall be tested using US EPA Reference Method 21 within 24 hours, and the leak shall be repaired in accordance with the repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Upon detection of a component with a liquid or gas leak, the owner or operator shall affix to that component a weatherproof readily visible tag that identifies the date and time of leak detection measurement and the measured leak concentration. The tag shall remain affixed to the leaking component until it has been successfully repaired or replaced, after which the tag shall be removed. Successful repair shall be confirmed by re-measuring the components using US EPA Reference Method 21 to determine that the component is below the minimum leak threshold after repair or replacement. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Excluding tanks, components or component parts which incur five (5) repair actions within a rolling 12-month period shall be replaced with a compliant component in working order and must be re-measured using US EPA Reference Method 21, to determine that the component is below the minimum leak threshold. A record of the replacement must be maintained in a log at the facility, and shall be made available upon request by the APCO. Failure to comply with all of the applicable Maintenance Requirements of Rule 4623 shall constitute a violation of Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The operator shall attempt to minimize all component leaks immediately to the extent possible, but no later than one (1) hour after detection of leak in order to stop or reduce leakage to the atmosphere. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. If a leak has been minimized but the leak still exceeds the applicable leak standards of District Rule 4623, an operator shall comply with at least one of the following requirements as soon as practicable but not later than 14 calendar days for minor gas leaks and 2 calendar days for major gas leaks and liquid leaks: 1) Repair or replace the leaking component; or 2) Vent the leaking component to a VOC control system as defined in Section 3.1 of Rule 4623; or 3) Remove the leaking component from operation. The leak rate measured, after leak minimization has been performed, shall be the leak rate used to determine the repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4623] Federally Enforceable Through Title V Permit
19. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
20. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
21. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, or method D5191, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
22. For crude oil with an API gravity of 26 degrees or less, TVP shall measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All leaks detected with the use of an Optical Gas Imaging (OGI) instrument shall be measured using EPA Reference Method 21 within two (2) calendar days of initial OGI leak detection or within 14 calendar days of initial OGI leak detection of an inaccessible or unsafe to monitor component to determine compliance with the leak thresholds and repair timeframes specified in District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following information: 1) The Permit to Operate (PTO) number and physical location of the tank being degassed, 2) The date and time that tank degassing and cleaning activities will begin, 3) The degassing method, as allowed pursuant to District Rule 4623, to be used, 4) The method to be used to clean the tank, including any solvents to be used, and 5) The method to be used to dispose of the removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10% or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90% or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.1 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10% VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit
27. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
29. During sludge removal from tanks containing an organic liquid with a TVP of 1.5 psia or greater, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
30. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
31. For tanks containing an organic liquid with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rules 2020 and 4623] Federally Enforceable Through Title V Permit
32. The operator shall maintain an inspection log containing, at a minimum, all of the following information: 1) Total number of components inspected, and total number and percentage of leaking components found during inspection; 2) Location, type, name or description of each leaking component and description of any unit where the leaking component is found; 3) Date of leak detection and method of leak detection; 4) For gas leaks, record the leak concentration in ppmv, and for liquid leaks record the volume; 5) Date of repair, replacement, or removal from operation of leaking components; 6) After the component is repaired or is replaced, the date of re-inspection and the leak concentration in ppmv; 7) Inspector's name, business mailing address, and business telephone number; 8) The facility operator responsible for the inspection and repair program shall sign and date the inspection log certifying the accuracy of the information recorded in the log; and 9) Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration. Copies of all records required by this condition shall be retained for a minimum of five (5) years after the date of an entry, and the records shall be made available to the APCO, California Air Resources Board (CARB), and US EPA upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
33. The owner or operator shall maintain records of tank cleaning activities and present these records to the District upon request. Records should include the final details of the planned degassing and cleaning activities submitted pursuant to District Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission Factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
35. All records required by this permit shall be maintained and retained on-site for a period of at least five (5) years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

ATTACHMENT B

Previous Title V Operating Permit

San Joaquin Valley

Air Pollution Control District

FACILITY: S-1372-0-3

EXPIRATION DATE: 05/31/2021

FACILITY-WIDE REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
4. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.13.1] Federally Enforceable Through Title V Permit
6. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
9. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: SENTINEL PEAK RESOURCES CA LLC

Location: HEAVY OIL WESTERN STATIONARY SOURCE, CA

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10. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit
11. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit
12. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit
13. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit
14. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit
15. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit
16. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit
17. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit
18. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit
19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
20. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit
21. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit
22. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 2 for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit
24. All VOC-containing materials subject to Rule 4601 shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit
25. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit
26. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit
27. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit
28. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
29. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit
30. Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8031] Federally Enforceable Through Title V Permit
31. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8041] Federally Enforceable Through Title V Permit
32. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit
33. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8061] Federally Enforceable Through Title V Permit
34. Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit
35. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

36. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit
37. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit
38. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit
39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. Particulate matter emissions from any permit unit at this facility shall not exceed 0.1 grain/dscf. If the equipment is fired, particulate matter emissions shall not exceed 0.1 grains/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
42. Sulfur compound emissions from any permit unit at this facility shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by firing the units only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds for each unit by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
43. Nitrogen oxide (NO_x) emissions from any permit unit at this facility shall not exceed 140 lb/hr, calculated as NO₂. [District Rules 4301, 5.2.2 and 2520, 9.4.2]
44. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
46. All records shall be retained on-site for a period of at least five years, and made available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. When applicable to 40 CFR Part 68, a subject facility shall submit to the proper authority a Risk Management Plan when mandated by the regulation. [40 CFR Part 68] Federally Enforceable Through Title V Permit
48. This facility is located west of interstate 5 in Kern County. Therefore, the requirements of District Rule 4351 (Amended October 19, 1995) do not apply to any equipment at this facility. A permit shield is granted from this Rule. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

49. On June 30, 2002, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin July 1 of every year, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-2-30

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

32.0 MMBTU/HR TEOR/NATURAL GAS-FIRED STEAM GENERATOR #5 (DIS #44826-70) WITH NORTH AMERICAN MAGNA-FLAME 4211-32-LE LOW-NOX BURNER WITH FGR AND O2 CONTROLLER (GAMBLE LEASE)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
6. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
7. This equipment is approved to be operated at the following locations: Sec. 06, T30S/R22E, Sec.'s 23 & 24, T31S/R22E; and Sec. 10, T31S/R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Vapors from TEOR operation, permit # S-1372-100 may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.939 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 111 ppmvd CO @ 3% O2 or 0.081 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.939 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 111 ppmvd CO @ 3% O2 or 0.081 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Flare S-1372-100 shall only be used to incinerate TEOR vapors when one or more of steam generators S-1372-1, '2 or '4 are not in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Total sulfur oxide (SOx as SO2) emissions shall not exceed 1,075.2 lb/day from steam generators S-1372-1, '2, '4, '127, '317, and flare '100. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Sulfur content of TEOR gas and fuel gas shall be demonstrated quarterly by detection tube sampling or other District approved methods. [District Rule 1081] Federally Enforceable Through Title V Permit
16. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-100 so that at least 95% by weight of the sulfur is removed. [District Rule 4320] Federally Enforceable Through Title V Permit
17. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
18. The SOx emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO₂, inlet" is equal to the concentration of SOx (expressed as SO₂) at the inlet side of the SOx emission control system (in lb/dscf) and "CSO₂, outlet" is equal to the concentration of SOx (expressed as SO₂) at the outlet side of the SOx emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
19. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NOx, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NOx and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
37. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
38. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
42. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
45. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
47. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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49. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
50. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
51. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
52. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-4-25

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#4) (DIS #44784-67) WITH NORTH AMERICAN MAGNA-FLAME 4211-25-LE LOW-NOX BURNER WITH FGR AND O2 CONTROLLER (GAMBLE LEASE)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
6. Vapors from TEOR operation, permit # S-1372-100 may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Sulfur content of TEOR gas and fuel gas shall be demonstrated quarterly by detection tube sampling or other District approved methods. [District Rule 1081 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. No emission reduction credit shall be granted for this steam generator while it is part of the approved 4405 alternate emission limit plan. [District Rule 4405] Federally Enforceable Through Title V Permit
9. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.088 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.088 lb-SOx/MMBtu, 0.014 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Flare S-1372-100 shall only be used to incinerate TEOR vapors when one or more of steam generators S-1372-1, '2 or '4 are not in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Total sulfur oxide (SOx as SO2) emissions shall not exceed 1,075.2 lb/day from steam generators S-1372-1, '2, '4, '127, '317 and flare '100. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-100 so that at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
16. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
17. The SOx emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO2, inlet" is equal to the concentration of SOx (expressed as SO2) at the inlet side of the SOx emission control system (in lb/dscf) and "CSO2, outlet" is equal to the concentration of SOx (expressed as SO2) at the outlet side of the SOx emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
18. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
36. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
37. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
42. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
45. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
46. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
49. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
50. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
51. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-8-32

EXPIRATION DATE: 05/31/2021

SECTION: NW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

32 MMBTU/HR J.F. NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#10) (DIS# 44510-76) WITH NORTH AMERICAN LOW NOX BURNER, FGR, AND O2 CONTROLLER (E&M LEASE)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Approved locations for this equipment: Sec. 16, T31S/R22E (Bremer Lease) and SW/4 of Sec. 10, T31S/R22E (E&M Lease). [District Rule 2201] Federally Enforceable Through Title V Permit
8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.014 lb-PM10/MMBtu, 138 ppmvd CO @ 3% O2 or 0.1 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.014 lb-PM10/MMBtu, 138 ppmvd CO @ 3% O2 or 0.1 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Total SOx (as SO2) emissions shall not exceed 1578.08 lb/day for the following steam generators: S-1372-8 (#10), S-1372-17 (#19); S-1372-18 (#28), S-1372-19 (#29), and S-1372-20 (#30). [District Rule 2201] Federally Enforceable Through Title V Permit
14. When burning TEOR gas, steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
15. When burning TEOR gas, sulfur compound (SO2) emission limit compliance shall be demonstrated by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
16. When burning TEOR gas, compliance with casing gas sulfur compound emission limits shall be demonstrated by record keeping of TEOR gas flowrate and H2S concentration. [District Rule 1070] Federally Enforceable Through Title V Permit
17. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-74 so that at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
18. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
19. The SOx emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO2, inlet" is equal to the concentration of SOx (expressed as SO2) at the inlet side of the SOx emission control system (in lb/dscf) and "CSO2, outlet" is equal to the concentration of SOx (expressed as SO2) at the outlet side of the SOx emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
20. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
36. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
38. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
42. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320 and 4351, 6.3.2] Federally Enforceable Through Title V Permit
43. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
44. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
45. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
47. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
50. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
51. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
52. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
53. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-10-24

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#11) (DIS# 44511-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER (BREMER LEASE)

PERMIT UNIT REQUIREMENTS

1. Steam generator shall only receive TEOR gas from TEOR permit S-1372-77, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on the TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
2. When complying with SOx emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
3. When complying with SOx emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. Emissions shall not exceed any of the following: PM10: 0.014 lb/MMBtu; NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @ 3% O2; VOC: 0.0003 lb/MMBtu; or CO: 138 ppmv @ 3 % O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. SOx (as SO2) emissions shall not exceed 46.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Steam generators S-1372-10, -14, -23, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on PUC quality natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Compliance with gas fired sulfur compound (SO2) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
8. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
24. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
27. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
36. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
39. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
40. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-13-29

EXPIRATION DATE: 05/31/2021

SECTION: NW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#16) (DIS# 12667-79) EQUIPPED WITH A NORTH AMERICAN G-LE ULTRA LOW-NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. This steam generator is approved to operate at the following locations: NW/4 Section 10, NW/4 Section 23 of T31S, R22E, and NW/4 Section 10 of T29S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Steam generator shall only receive TEOR gas from TEOR permit S-1372-316 (which may receive gas from TEOR permit S-1372-76) and the sulfur content of the combined TEOR gases shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal using the sulfur scrubber listed on TEOR permit S-1372-316 prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
10. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
11. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. SO_x (as SO₂) emissions shall not exceed 123.2 lb/day except as provided in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Steam generator S-1372-317 shall be exclusively fired on PUC quality natural gas when this steam generator is incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Total casing gas sulfur oxide (SO_x as SO₂) emissions shall not exceed 1,193.5 lb/day for the following steam generators and standby flare: S-1372-13 (#16), S-1372-16 (#12), S-1372-24 (#20), and S-1372-76. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Emissions shall not exceed any of the following: PM₁₀: 0.014 lb/MMBtu; NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmv @ 3% O₂; VOC: 0.003 lb/MMBtu; or CO: 138 ppmv @ 3% O₂. [District Rule 2201 and District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
44. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-14-27

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#13 BREMER, DIS# 44521-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, O2 CONTROLLER AND FGR

PERMIT UNIT REQUIREMENTS

1. Steam generator shall only receive TEOR gas from TEOR permit S-1372-77, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
2. When complying with SOx emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
3. When complying with SOx emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
4. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Emissions shall not exceed any of the following: PM10: 0.014 lb/MMBtu; NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @ 3% O2; VOC: 0.003 lb/MMBtu; or CO: 138 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. SOx (as SO2) emissions shall not exceed 46.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Steam generators S-1372-10, -14, -23, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on PUC quality natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Compliance with gas fired sulfur compound (SO2) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
9. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
37. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-16-27

EXPIRATION DATE: 05/31/2021

SECTION: NW 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#12) (DIS# 44519-76) EQUIPPED WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER AND EXHAUST GAS CONNECTED TO SCRUBBER/ESP LISTED ON S-1372-127 (MCKITTRICK FRONT LEASE)

PERMIT UNIT REQUIREMENTS

1. This steam generator is approved to operate at the following locations: Sec. 23, T31S, R22E, NW 1/4 Sec. 6, T30S, R22E, and NW 1/4 Sec. 10, T29S, R21E [District Rule 2201] Federally Enforceable Through Title V Permit
2. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
3. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The steam generator shall be equipped with piping from TEOR operation S-1372-100 to fuel gas inlet on burner when operating at Sec. 23, T31S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
5. SOx (as SO2) emissions from steam generator shall not exceed 180.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Total casing gas sulfur oxide (SOx as SO2) emissions shall not exceed 1,193.5 lb/day for the following steam generators and standby flare: S-1372-13 (#16), S-1372-16 (#12), S-1372-24 (#20), and S-1372-76. SOx as SO2 emissions from '-16 shall be calculated as $[(\text{mscf combusted in '-16})/(\text{combined mscf combusted in '-16, '-127, and '-317})] \times \text{total SOx emissions from scrubber/ESP '-127}$. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. Except during startup and shutdown emissions shall not exceed any of the following: PM10: 0.014 lb/MMBtu; NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @ 3% O2; VOC: 0.0012 lb/MMBtu; or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Compliance with 95% by weight sulfur removal efficiency requirement shall be conducted annually. [District Rule 4320] Federally Enforceable Through Title V Permit
11. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
27. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
29. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
30. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCF performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCF performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
39. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
40. Permittee shall maintain daily records of SO_x (as SO₂) emissions (lb/day) from steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
41. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
43. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-17-33

EXPIRATION DATE: 05/31/2021

SECTION: SW22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#19) (DIS# 45002-80)
EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Steam generator shall only receive TEOR gas from TEOR permit S-1372-312 (which may receive TEOR gas from permit S-1372-77) and the sulfur content of the combined TEOR gases shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal using the scrubber listed on TEOR permit S-1372-312 prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
8. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520] Federally Enforceable Through Title V Permit
9. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
10. Steam generators S-1372-1 and -17 shall not be located simultaneously at any of the following locations: Sec. 22, T32S, R23E; NE/4 & SE/4 Sec. 21, T32S, R23E; NW/4 & NE/4 Sec. 27, T32S, R23E; and NE/4 Sec. 28, T32S, R23E. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. No less than 0.35 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.048 lb-PM₁₀/MMBtu, 400 ppmvd CO @ 3% O₂ or 0.3 lb-CO/MMBtu, or 0.0006 lb-VOC/MMBtu. [District Rule 2201 and District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. SO_x (as SO₂) emissions shall not exceed 95.5 lb/day except as provided in the condition below. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total casing gas sulfur oxide (SO_x as SO₂) emissions shall not exceed 1,578.1 lb/day for the following steam generators: S-1372-8 (#10), S-1372-17 (#19); S-1372-18 (#28), S-1372-19 (#29), and S-1372-20 (#30). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when this steam generator is gas-fired and incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Sulfur compound (SO₂) emission limit compliance shall be demonstrated by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Compliance with casing gas sulfur compound emission limits shall be demonstrated by record keeping of TEOR gas flowrate and H₂S concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
36. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
38. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
42. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
43. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
44. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
45. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
47. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
50. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
51. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
52. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
53. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-18-27

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (#28 DIS# 45003-80)
EQUIPPED WITH FLUE GAS RECIRCULATION (FGR)

PERMIT UNIT REQUIREMENTS

1. No less than 0.35 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Steam generator shall only receive TEOR gas from TEOR permit S-1372-77, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
3. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
4. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: PM₁₀: 0.064 lb/MMBtu; VOC: 0.006 lb/MMBtu; NO_x: 0.008 lb/MMBtu or 7 ppmv @ 3% O₂ and CO: 138 ppmv @ 3% O₂. [District Rule 2201 and District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Total casing gas sulfur oxide (SO_x as SO₂) emissions shall not exceed 1578.08 lb/day for the following steam generators: S-1372-8 (#10), S-1372-17 (#19); S-1372-18 (#28), S-1372-19 (#29), and S-1372-20 (#30). [District Rule 2201] Federally Enforceable Through Title V Permit
7. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when this steam generator is gas-fired and incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Sulfur compound (SO₂) emission limit compliance shall be demonstrated by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
9. Compliance with casing gas sulfur compound emission limits shall be demonstrated by record keeping of TEOR gas flowrate and H₂S concentration. [District Rule 1070] Federally Enforceable Through Title V Permit
10. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
29. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
38. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
40. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
41. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-19-29

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#29) (DIS# 45004-80)
EQUIPPED WITH A NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR

PERMIT UNIT REQUIREMENTS

1. No less than 0.35 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Uncondensed vapors from TEOR operation, permit # S-1372-77, may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
3. SO_x (as SO₂) emissions shall not exceed 95.5 lb/day except as provided below. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Total casing gas sulfur oxide (SO_x as SO₂) emissions shall not exceed 1,578.1 lb/day for the following steam generators: S-1372-8 (#10), S-1372-17 (#19); S-1372-18 (#28), S-1372-19 (#29), and S-1372-20 (#30). [District Rule 2201] Federally Enforceable Through Title V Permit
5. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on PUC quality natural gas when this steam generator is gas-fired and incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The owner of any unit operated under the exemption of natural gas curtailment shall monitor and record for each unit the cumulative annual hours of operation on each liquid fuel during curtailment and testing. [District Rules 4306, and 4320] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed any of the following: 27 lb NO_x/day, 4,380 lb NO_x/year. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
10. Except during startup and shutdown emissions shall not exceed any of the following: PM₁₀: 0.0076 lb/MMBtu; NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmv @ 3% O₂; VOC: 0.006 lb/MMBtu; or CO: 138 ppmv @ 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-77 so that at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
12. Compliance with 95% by weight sulfur removal efficiency requirement shall be demonstrated annually. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
14. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
19. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
29. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
41. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
44. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-20-27

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#30) (DIS# 45005-80)
EQUIPPED WITH A NORTH AMERICAN, MODEL MAGNA-FLAME G-LE, LOW NOX BURNER, FGR AND O2
CONTROLLER

PERMIT UNIT REQUIREMENTS

1. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No less than 0.35 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Noncondensable vapors from TEOR operation, permit # S-1372-77, may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapor recovery gas burned in this device shall first be treated by a sulfur removal system so that at least 95% by weight of the sulfur is removed [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
5. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when this steam generator is gas-fired and incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
7. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.0637 lb-SOx/MMBtu, 0.064 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.0637 lb-SOx/MMBtu, 0.064 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.006 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Total SO_x (as SO₂) emissions shall not exceed 1,578.1 lb/day for the following steam generators: S-1372-8 (#10), S-1372-17 (#19); S-1372-18 (#28), S-1372-19 (#29), and S-1372-20 (#30). [District Rule 2201] Federally Enforceable Through Title V Permit
12. Sulfur compound (SO₂) emission limit compliance shall be demonstrated by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
13. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
14. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
19. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
29. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
41. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
44. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

45. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
46. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-24-31

EXPIRATION DATE: 05/31/2021

SECTION: NW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#20 DIS# 45220-81) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Steam generator shall only receive TEOR gas from TEOR permit S-1372-316 (which may receive gas from TEOR permit S-1372-76) and the sulfur content of the combined TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal using the sulfur scrubber listed on TEOR permit S-1372-316 prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
8. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320, 5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
9. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. When located at NW section 10, T29S, R21E, this unit shall be fired on natural gas. The SO₂ scrubber is not required at this location. [District Rule 2080] Federally Enforceable Through Title V Permit
11. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. No less than 0.4 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Emissions shall not exceed PM₁₀: 0.014 lb/MMBtu; SO_x (as SO₂): 123.4 lb/day; NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmv @ 3% O₂; VOC: 0.0004 lb/MMBtu; or CO: 138 ppmv @ 3% O₂. [District Rule 2201 and District Rules 4305, 5.1, 4306, 5.1, and 4320] Federally Enforceable Through Title V Permit
14. Compliance with gas fired sulfur compound (SO₂) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
15. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
31. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
43. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
46. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
48. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-29-32

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

30.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR #23 (DIS #45223-80) WITH NORTH AMERICAN MAGNA-FLAME G-LE LOW NOX BURNER, FGR, AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. No less than 0.179 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
8. This equipment is approved to be operated at the following locations: Section 8, T30S/R22E; and SE/4 Section 10, T31S/R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Sulfur content of natural gas shall not exceed 0.35 gr S/100 dscf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. Permittee shall measure and record the natural gas sulfur content and BTU content at the time of NOx testing, except for natural gas purchased from a PUC regulated utility. [District Rule 4406, 4.0]
12. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
13. No emission reduction credit shall be granted for this steam generator until it is removed from the approved 4405 alternate emission limit plan. [District Rule 4405] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.007 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.007 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306, and 4320] Federally Enforceable Through Title V Permit
18. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
37. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
38. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
42. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
43. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
45. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
47. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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49. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
50. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
51. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-30-27

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL/CASING GAS-FIRED STEAM GENERATOR (#33) (DIS# 45233-82) WITH O2 CONTROLLER, LOW-NOX BURNER AND FGR

PERMIT UNIT REQUIREMENTS

1. Steam generator shall only receive TEOR gas from TEOR permit S-1372-100, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
2. When complying with SOx emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
3. When complying with SOx emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
4. This equipment is approved to be operated at the following locations: Section 16, T31S/R22E; and NW/4 Section 06, T30S/R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
6. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
7. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu (as NO2), 0.014 lb-PM10/MMBtu, 138 ppmvd CO @ 3% O2, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. SOx (as SO2) emissions shall not exceed 97.9 lb/day except as provided below in condition #10. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Compliance with gas fired sulfur compound (SO₂) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
12. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
18. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
31. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
40. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
43. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

44. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
45. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-31-27

EXPIRATION DATE: 05/31/2021

SECTION: V **TOWNSHIP:** V **RANGE:** V

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/CASING GAS/TANK VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#34)
(DIS# 45234-82) EQUIPPED WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. This equipment is approved to be operated at the following locations: NE Section 16, T31S/R22E; and SW Section 10, T29S/R21E. [District Rule 2201] Federally Enforceable Through Title V Permit
8. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
9. SO_x (as SO₂) emissions shall not exceed 97.9 lb/day except as provided below. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions shall not exceed any of the following: 27 lb NO_x/day, 4,380 lb NO_x/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
14. Except during startup and shutdown emissions shall not exceed any of the following: PM₁₀: 0.014 lb/MMBtu; NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmvd @ 3.00% O₂; VOC: 0.003 lb/MMBtu; or CO: 138 ppmvd @ 3.00% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

15. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-316 so that at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
16. Compliance with 95% by weight sulfur removal efficiency requirement shall be conducted annually. [District Rule 4320] Federally Enforceable Through Title V Permit
17. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
35. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
36. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
45. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Permittee shall maintain records of volume of fuel gas burned and waste gas incinerated, fuel gas and waste gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
48. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

49. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
50. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-32-26

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#35) (DIS# 45235-82) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. Steam generator shall only receive TEOR gas from TEOR permit S-1372-100, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
2. When complying with SOx emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
3. When complying with SOx emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. This permit unit is authorized to operate at the following locations: Section 16, T31S, R22E (Bremer Fee Lease) and NW/4 Section 6, T30S, R22E (McKittrick Front Lease). [District Rule 2201] Federally Enforceable Through Title V Permit
5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
6. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
7. SOx (as SO2) emissions shall not exceed 97.9 lb/day except as provided below in condition #5. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions shall not exceed any of the following: PM10: 0.014 lb/MMBtu; NOx (as NO2): 0.008 lb/MMBtu or 7 ppmvd @ 3.00% O2; VOC: 0.003 lb/MMBtu; or CO: 138 ppmvd @ 3.00% O2. [District Rule 2201 and District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Compliance with gas fired sulfur compound (SO2) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
27. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
29. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
30. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
39. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
40. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
42. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-33-27

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#36) (DIS# 45236-82) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This permit unit is authorized to operate at the following locations: NW/4 Section 16, T31S, R22E (Bremer Fee Lease) and SW/4 Section 06, T30S, R22E (McFront Lease). [District Rule 2201] Federally Enforceable Through Title V Permit
2. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
3. When located at SW/4 Section 06, T30S, R22E (McFront Lease), this unit shall be fired on PUC quality natural gas only. [District Rule 2080] Federally Enforceable Through Title V Permit
4. When located at NW/4 Section 16, T31S, R22E, SO_x (as SO₂) emissions shall not exceed 97.9 lb/day except as provided in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
5. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Steam generator shall only receive TEOR gas from TEOR permit S-1372-100, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
7. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following: PM₁₀: 0.014 lb/MMBtu; NO_x (as NO₂): 0.008 lb/MMBtu or 7 ppmv @ 3 % O₂; VOC: 0.003 lb/MMBtu; or CO: 138 ppmv @ 3% O₂. [District Rule 2201 and District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
37. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
42. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-34-27

EXPIRATION DATE: 05/31/2021

SECTION: NW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#37) (DIS# 45237-82) WITH O2 CONTROLLER, LOW NOX BURNER, AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. This permit unit is authorized to operate at the following locations: NW/4 Section 16, T31S, R22E (Bremer Fee Lease), NW/4 Section 23, T31S, R22E (Dome Fee Lease), NE/4, Section 8, T30S, R22E (Morris Lease), and NE Section 6, T30S, R22E (McKittrick Unit). [District Rule 2201] Federally Enforceable Through Title V Permit
3. When located at NW/4 Section 23, T31S, R22E and NE/4, Section 8, T30S, R22E this unit shall be fired on PUC quality natural gas only. [District Rule 2201] Federally Enforceable Through Title V Permit
4. When located at NW/4 Section 16, T31S, R22E, compliance with gas fired sulfur compound (SO₂) emission limit shall be determined by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1070] Federally Enforceable Through Title V Permit
5. When located at NW/4 Section 16, T31S, R22E, compliance with SO_x (as SO₂) emission limits shall be demonstrated by record keeping of casing gas flowrate and H₂S concentration and multiplying H₂S lb/day x 1.88 to get SO₂ lb/day from stack after incineration. [District Rule 2201] Federally Enforceable Through Title V Permit
6. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall measure and record, at least monthly, the sulfur content and BTU content of the casing gas incinerated in this unit. [District Rule 4406, 4.0] Federally Enforceable Through Title V Permit
8. If continuous operation oxygen analyzer/controller is utilized, excess O₂ shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Steam generators S-1372-10, -14, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on utility grade natural gas when steam generators S-1372-8, -17, -18, -19, and -20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Sulfur content of combusted gas shall not exceed 1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.014 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.018 lb-NO_x/MMBtu, 0.014 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
14. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
44. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406] Federally Enforceable Through Title V Permit
47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-74-19

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

WELL VENT VAPOR COLLECTION AND CONTROL SYSTEM, SHARED WITH VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-370, INCLUDING A 12.8 MMBTU/HR KALDAIR FLARE, 20 MMBTU/HR JOHN ZINK STANDBY FLARE, SEPARATOR(S), HEAT EXCHANGER, ONE SULFUR REMOVAL SYSTEM, KNOCKOUT DRUM(S), VAPOR RECOVERY SKID (VAPOR B), THREE PHASE SEPARATORS, COMPRESSORS, HEAT EXCHANGERS, PUMPS, AND PIPING TO THE BREMER LEASE TEOR VAPOR CONTROL SYSTEM S-1372-77 (E&M LEASE)

PERMIT UNIT REQUIREMENTS

1. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of S-1372-74's TEOR gas shall be tested not less than quarterly. If compliance with the 10% VOC content limit has been demonstrated for 8 consecutive quarters, then the testing frequency shall be annually. If an annual source test fails to show compliance, quarterly testing shall resume [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. John Zink and Kaldair flares shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rules 2520, 9.4.2 and 4311] Federally Enforceable Through Title V Permit
4. John Zink and Kaldair flares in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. Maximum amount of gas combusted in 20 MMBtu/hr John Zink standby flare shall not exceed 295 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Maximum amount of gas combusted in 20 MMBtu/hr John Zink standby flare shall not exceed 22,500 MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emissions from 20.0 MMBtu/hr John Zink standby flare shall not exceed any of the following: NO_x (as NO₂): 0.068 lb/MMBtu; PM₁₀: 0.008 lb/MMBtu; CO: 0.102 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Maximum amount of sulfur contained in gas combusted by 20 MMBtu/hr John Zink standby flare shall not exceed 20,000 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall measure the sulfur content of the gas combusted in John Zink flare by District witnessed, or authorized, sample collection by ARB certified testing laboratory at startup and annually thereafter. [District Rules 1081, 7.2 and 2201] Federally Enforceable Through Title V Permit
10. Higher heating value of gas combusted in John Zink flare shall be monitored at least quarterly. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
11. Emissions from 12.8 MMBtu/hr Kaldair flare shall not exceed any of the following: NO_x (as NO₂): 0.068 lb/MMBtu; SO_x: 8.9 lb/day; PM₁₀: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H₂S and Mercaptans. H₂S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081] Federally Enforceable Through Title V Permit
14. Sulfur removal systems shall be used as needed to meet the emission limits of the John Zink flare, Kaldair flare, and steam generator S-1372-8. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Flares shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
16. Final vapor condenser shall utilize operational exhaust gas temperature indicator. [District Rule 1070 and District Rule 2201] Federally Enforceable Through Title V Permit
17. Mist eliminator shall be maintained in optimum operating condition. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Well vent vapors and vapors received from tank vapor control compressor S-1372-370 shall be combusted in Kaldair flare, John Zink flare, steam generator S-1372-8, piped to vapor control system S-1372-77 or TEOR operation S-1114-66. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Pilots shall be exclusively fired with PUC quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Permittee shall keep accurate daily records of amount of pilot fuel gas and TEOR noncondensable gas introduced to flare for incineration and shall make such records readily available for District inspection upon request. [District Rule 1070 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
21. Permittee shall maintain accurate records of well casing vapor H₂S concentration (periodic sampling of no less than once a quarter), daily volume of casing gas incinerated and calculated SO_x emissions to demonstrate compliance with SO_x limit. [District Rule 1070]
22. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
23. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
24. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
25. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
26. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
27. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
28. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
30. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
31. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
32. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit
33. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit
34. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
35. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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36. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
37. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
38. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
39. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
40. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
41. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
42. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
43. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
44. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
45. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
46. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
47. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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48. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
49. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit
50. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
51. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit
52. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit
53. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
54. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
55. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
56. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
57. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
58. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

59. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
60. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
61. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
62. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
63. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
64. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
65. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
66. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
67. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
68. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
69. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
70. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
71. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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72. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
73. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
74. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
75. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
76. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
77. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
78. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
79. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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80. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
81. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rule 108.1 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
82. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
83. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
84. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
85. Permittee shall keep accurate records of daily and annual heat input to John Zink flare in MMBtu/day and MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-76-22

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

TEOR OPERATION INCLUDING 162 STEAM ENHANCED WELLS, WELL VENT VAPOR COLLECTION SYSTEM, STANDBY FLARE, HEAT EXCHANGERS, SEPARATORS, COMPRESSORS, TANKS, & VAPOR PIPING TO UNITS S-1372-13, '-16, & '-24 (DOME/TUMBADOR LEASE)

PERMIT UNIT REQUIREMENTS

1. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of S-1372-76's TEOR gas shall be tested not less than quarterly. If compliance with the 10% VOC content limit has been demonstrated for 8 consecutive quarters, then the testing frequency shall be annually. If an annual source test fails to show compliance, quarterly testing shall resume [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. Leaks shall be inspected and repaired as specified in Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
4. Operation shall include 20' tall standby flare, vapor piping to standby flare, vapor piping to 3 DOGGR (Division of Oil and Gas and Geothermal Resources) approved disposal wells, and vapor piping to District approved TEOR steam generators S-1372-13, -16, & -24 for incineration. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operation shall include sulfa check system, to be used when necessary to meet sulfur compounds limits of standby flare and steam generators S-1372-13, -16, & -24. [District Rule 2201] Federally Enforceable Through Title V Permit
6. TEOR vapors shall be disposed of in DOGGR approved disposal wells and/or shall be incinerated by a stand-by flare or steam generator S-1372-13, -16, & -24, or piped to TEOR operation S-1114-66. [District Rule 2201] Federally Enforceable Through Title V Permit
7. TEOR vapors shall be equally distributed to standby flare and steam generators S-1372-13, -16, & -24 when one or more of the steam generators is inoperative. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Total casing gas sulfur oxide (SO_x as SO₂) emissions shall not exceed 1193.52 lb/day for the following steam generators and standby flare: S-1372-13 (#16), S-1372-16 (#12), S-1372-24 (#20), and S-1372-76. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Final vapor condenser shall be equipped with operational exhaust gas temperature indicator. [District Rule 1070 and District Rule 2201] Federally Enforceable Through Title V Permit
10. Mist eliminator shall be maintained and operated according to manufacturer's recommendation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Standby flare shall be used to incinerate TEOR vapors only when at least one of three steam generators S-1372-13, -16 & -24 is inoperative and remaining steam generators are fired on PUC quality natural gas, or as allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Standby flare shall be designed for smokeless operation, with no visible emissions in excess of 5% opacity. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. Permittee shall maintain accurate records of well casing vapor H₂S concentration (periodic sampling of no less than once per quarter), daily volume of casing vapor incinerated, and calculated daily SO₂ emissions. [District Rule 1070 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Permittee shall maintain with the permit a copy of DOGGR approval, and a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1070 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
17. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
18. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
19. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
20. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
21. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
22. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
23. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
24. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
25. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
26. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit
28. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit
29. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
30. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
31. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
32. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
33. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
34. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
35. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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36. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
37. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
38. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
39. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
40. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
41. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
42. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
43. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
44. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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45. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
46. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit
47. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit
48. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
49. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
50. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
51. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
52. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
53. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
54. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
55. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
56. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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57. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
58. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
59. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
60. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
61. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
62. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
63. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
64. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
65. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
66. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
67. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
68. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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69. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
70. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
71. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
72. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
73. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
74. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
75. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
76. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rule 108.1 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
77. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
78. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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79. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
80. Permittee shall maintain a written record of VOC content of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
81. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-77-25

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

TEOR OPERATION WELL VENT VAPOR COLLECTION SYSTEM WITH 450 STEAM DRIVE WELLS, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, SULFUR REMOVAL SYSTEM, COMPRESSORS, VAPOR PIPING TO STEAM GENERATORS, 33.3 MMBTU/HR STANDBY FLARE, AND PIPING FROM THE E&M LEASE TEOR VAPOR CONTROL SYSTEM S-1372-74 (BREMER LEASE)

PERMIT UNIT REQUIREMENTS

1. Standby flare shall be equipped with automatically lit pilot and waste gas shutoff upon flame failure. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Standby flare shall only be used to incinerate TEOR vapors when steam generator S-1372-17, S-1372-18, S-1372-19, or S-1372-20 are inoperable. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Emission rates from flare shall not exceed the following: PM10: 0.026 lb/MMBtu, NOx (as NO2): 0.068 lb/MMBtu, VOC: 0.063 lb/MMBtu, SOx (as SO2): 221.8 lb/day, and CO: 0.37 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Sulfur oxide (SOx as SO2) emissions shall not exceed 80,957 lb/yr from the flare. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Maximum amount of gas combusted in the flare shall not exceed 800 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H2S and Mercaptans. H2S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081] Federally Enforceable Through Title V Permit
7. Higher heating value of gas combusted in the flare shall be monitored at least quarterly. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
8. Measured heating value and quantity of gas flared shall be used to determine compliance with daily heat input limit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rules 2520, 9.4.2 and 4311] Federally Enforceable Through Title V Permit
10. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
12. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
14. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
15. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
16. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
17. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
18. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
19. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
20. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit
21. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit

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22. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following:
 - 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
23. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
24. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
25. Operator shall monitor vent gas composition using one of the five methods pursuant to Section 6.6.1 through Section 6.6.5, as appropriate. [District Rule 4311, 6.6] Federally Enforceable Through Title V Permit
26. Operator shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311, 6.7] Federally Enforceable Through Title V Permit
27. All of the general monitoring provisions of Section 6.9, as applicable, shall be met. [District Rule 4311, 6.9] Federally Enforceable Through Title V Permit
28. Operator shall install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than one frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. In lieu of video monitoring the operator may use an alternative monitoring method that provides data to verify date, time, vent gas flow, and duration of flaring events. [District Rule 4311, 6.10] Federally Enforceable Through Title V Permit
29. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
30. The following test method shall be used for TEOR gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520] Federally Enforceable Through Title V Permit
31. Operation shall include sulfur removal system, to be used when necessary to meet sulfur compounds limits of TEOR steam generators S-1372-17, S-1372-18, S-1372-19, S-1372-20, and flare (S-1372-77). [District Rule 2201] Federally Enforceable Through Title V Permit
32. When purchasing steam from Midway Sunset Cogeneration, an equivalent number of permittee's Bremer Lease generators shall be shutdown unless otherwise approved by the District. [District Rule 2201] Federally Enforceable Through Title V Permit
33. If vapor combustion sources are inoperative, well vent vapors shall not be vented to the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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34. Noncondensable vapors from this well vent vapor control system shall be incinerated in steam generators S-1372-17, S-1372-18, S-1372-19, S-1372-20, or in flare (S-1372-77) or injected into DOGGR-approved gas disposal wells and/or piped to TEOR operation S-1114-66. [District Rule 2201] Federally Enforceable Through Title V Permit
35. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
36. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
37. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
38. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
39. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
40. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
41. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
42. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
43. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
44. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
45. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

46. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
47. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit
48. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
49. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit
50. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit
51. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
52. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
53. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
54. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
55. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
56. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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57. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
58. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
59. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
60. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
61. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
62. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
63. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
64. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
65. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
66. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
67. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
68. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
69. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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70. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
71. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
72. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
73. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
74. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
75. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
76. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
77. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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78. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
79. VOC content of S-1372-77's TEOR gas shall be tested not less than quarterly. If compliance with the 10% VOC content limit has been demonstrated for 8 consecutive quarters, then the testing frequency shall be annually. If an annual source test fails to show compliance, quarterly testing shall resume [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
80. Permittee shall maintain accurate records of well casing vapor H₂S concentration at sulfur scrubber outlet (periodic sampling of no less than once per quarter). [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
81. Permittee shall maintain accurate records of daily and annual volumes of casing vapors incinerated in flare. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
82. Permittee shall maintain with the permit a current listing of all steam enhanced wells with casing vents connected to the well vent collection and control system. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
83. Permittee shall maintain a written record of VOC content of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
84. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
85. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
86. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
87. Permittee shall keep accurate records of daily heat input to standby flare in MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
88. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-87-18

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

TEOR OPERATION WITH WELL CASING COLLECTION SYSTEM WITH VAPOR PIPING TO UNITS S-1372-100, SERVING 98 STEAM ENHANCED WELLS, WELL COLLECTION PIPING, FLARE, NONCONDENSIBLE VAPOR PIPING TO FLARE, SULFA CHECK UNIT, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, COMPRESSORS, LUBE OIL TANKS, AND PUMPS (WELPORT LEASE)

PERMIT UNIT REQUIREMENTS

1. Leaks shall be inspected and repaired as specified in Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
2. Gas leaks shall be defined as excess of 10,000 ppm of methane measured with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201, 4401] Federally Enforceable Through Title V Permit
3. Condensate shall be disposed of in a manner preventing VOC emissions to the atmosphere. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
4. Total fugitive volatile organic compound (VOC) emission rate shall not exceed 60.5 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Compliance with sulfur emission limit shall be verified by daily fuel consumption and quarterly fuel sulfur content, and such records shall be available for District inspection for five years. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
6. Compliance with all other emission limits shall be verified by daily fuel consumption and operational data, and such records shall be available for District inspection for five years. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Well vent casing gases shall vent only to flare or the vapor control system listed on permit S-1372-100. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Flare shall operate with no visible emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Flare pilot shall fire continuously. [District NSR Rule] Federally Enforceable Through Title V Permit
13. Flare shall be equipped with automatic pilot. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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14. Flare shall only use PUC quality natural gas as auxiliary fuel. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Sulfur oxide (SOx) emission rate from the incineration of non-condensable vapor recovery gases in flare shall not exceed 274.56 lb/day as SO₂. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Total gas flow rate to flare shall not exceed 361,000 acf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Emissions from the flare shall not exceed any of the following: NO_x 0.068 lb/MMBtu, CO 0.310 lb/MMBtu, PM₁₀ 0.026 lb/MMBtu and VOC 0.032 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
19. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
21. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
22. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
23. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
24. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
25. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
26. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
27. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
28. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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29. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit
30. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit
31. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
32. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
33. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
34. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(as amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
35. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
36. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
37. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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38. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
39. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
40. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
41. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
42. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
43. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
44. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
45. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
46. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
48. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit
49. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit
50. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
51. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
52. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
53. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
54. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
55. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
56. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
57. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
58. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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59. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
60. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
61. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
62. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
63. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
64. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
65. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
66. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
67. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
68. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
69. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
70. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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71. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
72. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
73. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
74. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
75. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
76. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
77. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
78. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
79. The concentration of sulfur compounds in the exhaust from combustion equipment shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
80. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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81. Permittee shall maintain daily and annual records of volume of gas flared. [District Rule 2201] Federally Enforceable Through Title V Permit
82. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request [District Rule 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-99-10

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

TEOR OPERATION INCLUDING 132 STEAM ENHANCED WELLS, WELL VENT VAPOR RECOVERY SYSTEM AND VAPOR PIPING TO UNIT S-1372-100, SLUG CATCHER, SCRUBBERS, HEAT EXCHANGER, COMPRESSORS, PUMPS, STANDBY FLARE, SULFA CHECK SYSTEM, & VAPOR PIPING TO UNIT S-1372-26 (MCKITTRICK FEE/HOYT LEASE)

PERMIT UNIT REQUIREMENTS

1. Leaks shall be inspected and repaired as specified in Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
2. Collected condensate shall be discharged into production pipeline. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Liquids collected in drip pot on noncondensable piping going to steam generator S-1372-26 shall be returned to condensate collection vessel. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Standby flare shall only be used to incinerate TEOR vapors when steam generator S-1372-26 is inoperative. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Noncondensable vapors from this well vent vapor control system shall be incinerated in steam generator S-1372-26 or standby flare. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Fugitive VOC emissions from vapor collection and control system shall not exceed 93.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Sulfur compounds (as SO₂) emissions from incineration of TEOR vapors shall not exceed 2.56 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Permittee shall maintain accurate records of well casing vapor total sulfur concentration (periodic sampling of no less than once per quarter), daily volume of casing vapor incinerated, and calculated daily SO₂ emissions. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. Permittee shall maintain with the permit a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. Compliance with sulfur emission limit shall be verified by daily fuel consumption and quarterly fuel sulfur content, and such records shall be available for District inspection for five years. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
15. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
16. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
17. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
18. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
19. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
20. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
21. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
22. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
23. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit

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24. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit
25. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
26. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
27. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
28. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
29. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
30. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
31. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit

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32. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
33. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
34. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
35. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
36. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
37. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
38. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
39. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit
40. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
41. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

42. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit
43. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
44. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
45. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
46. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
47. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
48. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
49. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
50. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
51. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
52. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
53. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
54. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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55. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
56. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
57. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
58. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
59. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
60. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
61. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
62. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
63. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
64. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
65. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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66. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
67. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
68. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
69. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
70. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
71. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following requirements: County Rule 108.1 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
72. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
73. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
74. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-100-39

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

TEOR OPERATION WITH WELL CASING COLLECTION SYSTEM WITH VAPOR PIPING TO UNIT S-1372-99 SERVING 933 STEAM ENHANCED WELLS WITH 3-PHASE SEPARATORS, STANDBY FLARE, SLUG CATCHER, SCRUBBERS, HEAT EXCHANGERS, COMPRESSORS, PUMPS, SULFA CHECK AND LIQUID SULFUR REMOVAL SYSTEMS (GAMBLE/MCKITTRICK FRONT)

PERMIT UNIT REQUIREMENTS

1. Well vent vapor collection system shall be equipped with backflow device(s) to ensure vapors from other permits' vapor piping does not comeingle with 100's well vent vapor collection system vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of S-1372-100's TEOR gas shall be tested not less than quarterly. If compliance with the 10% VOC content limit has been demonstrated for 8 consecutive quarters, then the testing frequency shall be annually. If an annual source test fails to show compliance, quarterly testing shall resume [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. Permittee shall maintain a written record of VOC content of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operation shall include the following equipment: 933 steam enhanced wells, well vent vapor collection system, standby flare, slug catchers, heat exchangers, compressors, pumps, vapor piping, dry fuel gas sulfur scrubbing system and liquid sulfur removal systems, tanks and 3-phase separators. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operation shall include vapor piping from tanks S-1372-128, '-209, '-220, '-323, '-405, '-412, and S-1641-34, '-35, '-36, and '-37 to vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit
7. At least one sulfur removal system shall be operated at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
8. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with liquid sulfur removal system. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Collected condensate shall be discharged into production pipeline. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Flare S-1372-100 shall only be used to incinerate TEOR vapors when one or more of steam generators S-1372-1, -2, -4, -16, -127, and -317 are not in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Flare shall only use PUC quality natural gas as auxiliary fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Flare shall be designed for smokeless operation, with no visible emissions in excess of 5% opacity. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520] Federally Enforceable Through Title V Permit
14. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520] Federally Enforceable Through Title V Permit
15. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
16. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
17. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311] Federally Enforceable Through Title V Permit
18. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311] Federally Enforceable Through Title V Permit
19. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311] Federally Enforceable Through Title V Permit
20. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311] Federally Enforceable Through Title V Permit
21. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311] Federally Enforceable Through Title V Permit
22. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
23. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311] Federally Enforceable Through Title V Permit
24. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311] Federally Enforceable Through Title V Permit
26. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311] Federally Enforceable Through Title V Permit
27. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311] Federally Enforceable Through Title V Permit
28. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311] Federally Enforceable Through Title V Permit
29. Operator shall monitor vent gas composition using one of the five methods pursuant to Section 6.6.1 through Section 6.6.5, as appropriate. [District Rule 4311] Federally Enforceable Through Title V Permit
30. Operator shall monitor the volumetric flows of purge and pilot gases with flow measuring devices or other parameters as specified on the Permit to Operate so that volumetric flows of pilot and purge gas may be calculated based on pilot design and the parameters monitored. [District Rule 4311] Federally Enforceable Through Title V Permit
31. All of the general monitoring provisions of Section 6.9, as applicable, shall be met. [District Rule 4311] Federally Enforceable Through Title V Permit
32. Operator shall install and maintain equipment that records a real-time digital image of the flare and flame at a frame rate of no less than one frame per minute. The recorded image of the flare shall be of sufficient size, contrast, and resolution to be readily apparent in the overall image or frame. The image shall include an embedded date and time stamp. The equipment shall archive the images for each 24-hour period. In lieu of video monitoring the operator may use an alternative monitoring method that provides data to verify date, time, vent gas flow, and duration of flaring events. [District Rule 4311] Federally Enforceable Through Title V Permit
33. Vapors from this well vent vapor control system shall be incinerated in steam generators S-1372-1, -2, -4, -30, -32, -33, -127, -317, -334 or standby flare and/or injected into DOGGR approved gas injection wells. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Total sulfur oxide (SO_x as SO₂) emissions shall not exceed 1,075.2 lb/day for the following steam generators: S-1372-1, -2, -4, -127, -317, and standby flare. [District Rule 2201] Federally Enforceable Through Title V Permit

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35. Fugitive emissions from vapor collection and control system shall not exceed 239.6 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
36. There shall be no more than 30 gas leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Permittee shall maintain accurate records of well casing vapor H₂S concentration (periodic sampling of no less than once per month), daily volume of casing vapor incinerated, and calculated daily SO₂ emissions from S-1372-1, '-2, and '-4. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
38. Permittee shall maintain with the permit a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
39. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit
40. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520] Federally Enforceable Through Title V Permit
41. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
42. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
43. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
44. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
45. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
46. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401] Federally Enforceable Through Title V Permit
47. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
49. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
50. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
51. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401] Federally Enforceable Through Title V Permit
52. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
53. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
54. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
55. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
56. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
57. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
58. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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59. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
60. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401] Federally Enforceable Through Title V Permit
61. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401] Federally Enforceable Through Title V Permit
62. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
63. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
64. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
65. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
66. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
67. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
68. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
69. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
70. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
71. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
72. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
73. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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74. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
75. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401] Federally Enforceable Through Title V Permit
76. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
77. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
78. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
79. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
80. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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81. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
82. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
83. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
84. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
85. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407] Federally Enforceable Through Title V Permit
86. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520] Federally Enforceable Through Title V Permit
87. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
88. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-111-16

EXPIRATION DATE: 05/31/2021

SECTION: SW22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL/WASTE GAS-FIRED STEAM GENERATOR (#46) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FGR

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
8. Steam generators S-1372-1 and '-111 shall not be located simultaneously at any of the following locations: Sec. 22, T32S, R23E; NE/4 & SE/4 Sec. 21, T32S, R23E; NW/4 & NE/4 Sec. 27, T32S, R23E; and NE/4 Sec. 28, T32S, R23E. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
12. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. Steam generator shall be fired on gaseous fuel treated to remove 95% by weight of sulfur compounds; or treated such that the sulfur content of all fuel streams combined does not exceed 1 gr of sulfur compounds (as S) per 100 dscf, which meets the most stringent emission requirements of BACT. [District Rule 2201]
14. SO_x (as SO₂) emissions shall not exceed 95.5 lb/day (22.3 gr S/100 scf) except as provided in the condition below. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Oxides of sulfur emissions shall not exceed 1578.1 lb/day as SO₂ from the following steam generators: S-1372-8, '17, '18, '19, '20, '-111 and standby flare S-1372-312. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Except during startup and shutdown emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 138 ppmvd CO @ 3% O₂ or 0.102 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4301, 4305, 4306, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
17. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
35. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
36. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
45. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. Permittee shall submit notification to the District of the date of construction, anticipated startup, and actual startup. Notifications shall be postmarked no later than 30 days after construction and 15 days after actual startup. The notifications shall include the design heat input and identification of fuels for this permit unit. [40 CFR 60.48c (a)]
49. If the unit's actual emissions exceed 4,161 lb NO_x and 1,560 lb VOCs per calendar year the permittee must report to the District the annual NO_x and VOC emissions as calculated pursuant to paragraph 40 CFR 51.165(a)(6)(iii) and any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection. Such information must be submitted to the District for a period of 5 calendar years beginning the year of operation under ATC S-1372-111 and shall be submitted within 60 days of the end of each calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
50. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
51. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)]
52. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
53. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
54. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-112-17

EXPIRATION DATE: 05/31/2021

SECTION: NW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#45 GAMBLE) WITH NORTH AMERICAN 4231-GLE ULTRA-LOW NOX BURNER, O2 CONTROLLER, AND FGR

PERMIT UNIT REQUIREMENTS

1. Steam generator shall be equipped with operational fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Natural gas fuel sulfur content shall not exceed 1.0 grains-S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Emission rates shall not exceed: NOx (as NO2): 7 ppmvd @ 3% O2 or 0.0085 lb/MMBtu; or CO: 30 ppmvd @ 3% O2 or 0.022 lb/MMBtu. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. Emission rates shall not exceed any of the following: PM10: 0.005 lb/MMBtu; or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Emission rates during startup and shutdown shall not exceed: NOx - 15 ppmv @ 3% O2 or 0.018 lb/MMBtu; CO 400 ppmv @ 3% O2 or 0.296 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Emissions rate of NOx shall not exceed 15.8 lb/day nor 4,654 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions rate of CO shall not exceed 97.8 lb/day nor 12,045 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
11. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
29. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
37. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
38. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
40. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
41. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
42. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
43. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
44. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-113-15

EXPIRATION DATE: 05/31/2021

SECTION: NW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#44) WITH NORTH AMERICAN GLE LOW NOX BURNER, O2 CONTROLLER AND FGR

PERMIT UNIT REQUIREMENTS

1. Steam generator shall be equipped with operational fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA test methods. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.0364 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
8. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
23. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
27. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
35. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
38. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-114-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL SUMP REPLACEMENT TANK WITH ASSOCIATED VALVES, FLANGES, PUMPS, AND PIPING

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
4. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
5. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
6. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
7. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-115-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL SUMP REPLACEMENT TANK WITH ASSOCIATED VALVES, FLANGES, PUMPS, AND PIPING

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
4. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
5. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
6. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
7. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-116-3

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL SUMP REPLACEMENT TANK WITH ASSOCIATED VALVES, FLANGES, PUMPS, AND PIPING

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Tank shall receive material from facility's Midway-Sunset Oil Treating facility. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
5. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
6. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
8. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-117-3

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF SUMP REPLACEMENT TANK WITH ASSOCIATED VALVES, FLANGES, PUMPS AND PIPING

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. Valves and flanges shall be maintained in good repair and shall have no visible leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
4. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
5. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
6. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
7. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit
8. Pursuant to 40 CFR 60.110(a), since this tank is less than 40,000 gallons in capacity, Subpart K is not applicable to this tank. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-127-28

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR #43 EQUIPPED WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE LOW NOX BURNER, FGR, O2 CONTROLLER, AND EXHAUST GAS SOX SCRUBBER/ESP SHARED WITH S-1372-317 (MCKITTRICK FRONT LEASE)

PERMIT UNIT REQUIREMENTS

1. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 4.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
2. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained for each fuel line. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
3. Exhaust from unit shall be directed only to SO2 scrubber/wet ESP authorized herein except when burning PUC quality natural gas exclusively. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Scrubber/wet ESP shall be in operation when combusting TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapors from TEOR operation, permit # S-1372-100 may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.324 lb-SOx/MMBtu, 0.008 lb-PM10/MMBtu, 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.324 lb-SOx/MMBtu, 0.008 lb-PM10/MMBtu, 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306 and 4320] Federally Enforceable Through Title V Permit
9. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. Total sulfur oxide (SOx as SO2) emissions shall not exceed 1,075.2 lb/day from steam generators S-1372-1, '2, '4, '127, '317, and flare '100. [District Rule 2201] Federally Enforceable Through Title V Permit
12. All vapor recovery gas burned in this device shall first be treated by the scrubber/wet ESP so at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
13. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
14. The SOx emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO2, inlet" is equal to the concentration of SOx (expressed as SO2) at the inlet side of the SOx emission control system (in lb/dscf) and "CSO2, outlet" is equal to the concentration of SOx (expressed as SO2) at the outlet side of the SOx emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
15. The total gas fired in this unit, on a monthly average, shall be less than 50% PUC quality natural gas, by volume. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet and no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet. PUC quality natural gas also means high methane gas of at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
16. The permittee shall maintain monthly records of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit
17. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Scrubber liquor pH shall be maintained within the range demonstrated to achieve compliance with SO2 emissions limit and control efficiency performance, and shall be continuously monitored. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Scrubber mist eliminator shall be properly cleaned and maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
20. The wet ESP's secondary DC voltage shall be monitored weekly to ensure it is operating between 35 to 50KV [District Rule 2201] Federally Enforceable Through Title V Permit
21. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than that demonstrated to achieve compliance during source testing. [District Rule 2201] Federally Enforceable Through Title V Permit
22. When any unit connected to scrubber/wet ESP is burning TEOR gas, scrubber/wet ESP shall be operating and permittee shall demonstrate compliance with sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter unless no TEOR gas has been burned since the last scrubber performance source test. Sulfur removal efficiency of scrubber/wet ESP shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least quarterly. [District Rule 2201] Federally Enforceable Through Title V Permit
23. When unit is operated without scrubber/wet ESP, permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content within 60 days of initiating operation without scrubber. Analyses, as approved by the APCO, provided by the gas supplier may be used to satisfy this requirement. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Methods 6, 6B, 8, or ARB 100. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SO_x emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
35. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
37. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
38. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
40. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
41. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
42. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
43. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
44. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
45. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
46. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
48. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
49. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
50. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
51. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
52. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
53. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
54. Permittee shall maintain records of the wet ESP's secondary DC voltage and shall be made readily available for District inspection upon request [District Rule 2201] Federally Enforceable Through Title V Permit
55. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
56. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
57. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

58. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
59. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
60. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-128-7

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,500 BBL WASH TANK (#80) AND TWO FREE WATER KNOCKOUT VESSELS WITH VAPOR RECOVERY SYSTEM
SHARED WITH PERMIT UNITS S-1372-129, 130, 131, 132, AND 135 (UNIT LEASE)

PERMIT UNIT REQUIREMENTS

1. The vapor recovery system shall include the following operational equipment: pressure/vacuum relief valves, piping to pressure relief valve at vapor collection manifold, one air cooled heat exchanger, one vapor recovery compressor, one compressor discharge gas/liquid separator, one condensate pump, and vapor piping to TEOR vapor control system S-1372-100. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Vapor control system efficiency shall be maintained at no less than 99% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The API gravity of an organic liquid stored in this tank shall be less than 26 degrees. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The total VOC emissions from the controlled vapor displacement and components connecting vapor control piping between the tank and the main vapor control trunk line shall be less than 0.5 pounds per day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Pressure/vacuum relief valves shall be set to open at 2 oz./square inch pressure and 0.5 oz./square inch vacuum. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Vapor compressor shall activate whenever tank internal pressure exceeds 2 oz./square inch. [District Rule 2201] Federally Enforceable Through Title V Permit
8. There shall be no truck loading or unloading at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Liquids from gas/liquid separators shall be pumped back to tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
10. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
11. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
12. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
13. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
16. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
17. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
18. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
19. Hatch, tank seals and seams, cable seals, piping components directly affixed to the tank and within five feet of the tank, including but not limited to valves, flanges, connectors etc shall be inspected annually by the facility operator using portable hydrocarbon detection instrument in accordance with EPA Method 21, visually, or ultrasonically (as appropriate) to ensure the structural integrity of the tank. [District Rules 2201, 4623 (Table 3)] Federally Enforceable Through Title V Permit
20. For leaking components, the operator shall immediately affix a tag and maintain records of liquid leak and gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201, 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
21. Upon detection of any gas-leak, the operator shall: (a) Eliminate the leak within 8 hours after detection. (b) If the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection, and (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rules 2201, 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
22. Leaking tank components that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rules 2201, 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
23. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rules 2201, 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
24. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201, 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. For crude oil with an API gravity of 26 degrees or less, TVP shall be measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rules 2201, 4623, 6.4] Federally Enforceable Through Title V Permit
27. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92(2000) or "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rules 2201, 4623, 6.4] Federally Enforceable Through Title V Permit
28. The efficiency of any VOC destruction device shall be measured using EPA Method 18, 25, 25A, or 25B (as appropriate). [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
29. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. Operator shall conduct a TVP and API testing at least once every 24 months during summer (July - September) and/or whenever there is a change in the source or type of organic liquid stored in the tank. Operator shall submit records of TVP and API gravity testing within 45 days of performing the test. These records shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2201, 2520, 9.3.2.] Federally Enforceable Through Title V Permit
33. The permittee shall maintain records sufficient to demonstrate compliance with the daily emission limit. These records shall contain calculated emission quantity as well as each process variable used in the respective calculations. All records shall be retained on site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 2201, 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from a common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of Rule 4801 (Amended 12/17/92) and 40 CFR Part 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-129-7

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL PRODUCTION TANK (#78) SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT UNIT S-1372-128

PERMIT UNIT REQUIREMENTS

1. There shall be no truck loading or unloading at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Facility piping system shall be routinely inspected for leaks and all leaks shall be promptly repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Tank vapors shall be vented only to vapor control system listed on tank permit S-1372-128. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor control efficiency shall be maintained at no less than 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The tank pressure relief valves shall not open unless the tank internal pressure exceeds 2.0 oz. or falls below 0.5 oz. vacuum. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor compressor shall activate whenever tank internal pressure exceeds 2 oz./square inch. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Vapor collection system shall not discharge to atmosphere except during breakdown conditions pursuant to Rule 1100. [District Rule 1100] Federally Enforceable Through Title V Permit
8. Liquids from gas/liquid separators shall be pumped back to tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of tank vapor space and vapor control system piping and components. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
15. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
16. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
17. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
18. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
19. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
20. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
21. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
23. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
24. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after minimization. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
25. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
27. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
28. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon requests. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC**MAILING ADDRESS:** 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309**LOCATION:** HEAVY OIL WESTERN STATIONARY SOURCE
CA**SECTION:** 06 **TOWNSHIP:** 30S **RANGE:** 22E**PHYSICAL LOCATION:** McKittrick Unit Lease**INSPECT PROGRAM PARTICIPANT:** NO**EQUIPMENT DESCRIPTION:**

2,000 BBL WATER DISPOSAL TANK (#79) WITH VAPOR RECOVERY SYSTEM SHARED WITH S-1372-128

CONDITIONS

1. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid, tank may be disconnected from vapor control system and may be open. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be connected to vapor control system and is subject to normal leak free requirements. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Pressure/vacuum relief valves shall be set to open at 2 oz./square inch pressure and 0.5 oz./square inch vacuum. [District Rule 2201] Federally Enforceable Through Title V Permit
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The API gravity of an organic liquid stored in this tank shall be less than 26 degrees. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Vapor compressor shall activate whenever tank internal pressure exceeds 2 oz./square inch. [District Rule 2201] Federally Enforceable Through Title V Permit
10. There shall be no truck loading or unloading at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Facility piping system shall be routinely inspected for leaks and all leaks shall be promptly repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Vapor collection system shall not discharge to atmosphere except during breakdown conditions pursuant to Rule 1100. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Liquids from gas/liquid separators shall be pumped back to tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Vapor control system efficiency shall be maintained at no less than 99% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The total VOC emissions from the controlled vapor displacement and components connecting vapor control piping between the tank and the main vapor control trunk line shall be less than 0.5 pounds per day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
17. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
18. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
19. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
20. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
21. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
22. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
23. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
24. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. Hatch, tank seals and seams, cable seals, piping components directly affixed to the tank and within five feet of the tank, including but not limited to valves, flanges, connectors etc shall be inspected annually by the facility operator using portable hydrocarbon detection instrument in accordance with EPA Method 21, visually, or ultrasonically (as appropriate) to ensure the structural integrity of the tank. [District Rules 2201, 4623 (Table 3)] Federally Enforceable Through Title V Permit
26. For leaking components, the operator shall immediately affix a tag and maintain records of liquid leak and gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201, 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
27. Upon detection of any gas-leak, the operator shall: (a) Eliminate the leak within 8 hours after detection. (b) If the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection, and (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rules 2201, 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

28. Leaking tank components that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rules 2201, 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
29. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rules 2201, 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
30. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201, 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
31. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. For crude oil with an API gravity of 26 degrees or less, TVP shall be measured using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rules 2201, 4623, 6.4] Federally Enforceable Through Title V Permit
33. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92(2000) el "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". Should the permittee choose to use different test methodology, the methodology shall be approved by the District, the ARB, and the EPA prior to its use. [District Rules 2201, 4623, 6.4] Federally Enforceable Through Title V Permit
34. The efficiency of any VOC destruction device shall be measured using EPA Method 18, 25, 25A, or 25B (as appropriate). [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
35. {981} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. {941} The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. Operator shall conduct a TVP and API testing at least once every 24 months during summer (July - September) and/or whenever there is a change in the source or type of organic liquid stored in the tank. Operator shall submit records of TVP and API gravity testing within 45 days of performing the test. These records shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2201, 2520, 9.3.2.] Federally Enforceable Through Title V Permit
39. The permittee shall maintain records sufficient to demonstrate compliance with the daily emission limit. These records shall contain calculated emission quantity as well as each process variable used in the respective calculations. All records shall be retained on site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 2201, 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. As used in this permit, the term "source or type of petroleum" shall mean petroleum liquids with similar characteristics. The operator shall maintain records of the API gravity of petroleum liquids stored in this unit to determine which oils are from a common source. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

41. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of Rule 4801 (Amended 12/17/92) and 40 CFR Part 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-131-7

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL PRODUCTION TANK (#77) SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT UNIT S-1372-128

PERMIT UNIT REQUIREMENTS

1. There shall be no truck loading or unloading at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Facility piping system shall be routinely inspected for leaks and all leaks shall be promptly repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Tank vapors shall be vented only to vapor control system listed on tank permit S-1372-128. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor control efficiency shall be maintained at no less than 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The tank pressure relief valves shall not open unless the tank internal pressure exceeds 2.0 oz. or falls below 0.5 oz. vacuum. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor compressor shall activate whenever tank internal pressure exceeds 2 oz./square inch. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Vapor collection system shall not discharge to atmosphere except during breakdown conditions pursuant to Rule 1100. [District Rule 1100] Federally Enforceable Through Title V Permit
8. Liquids from gas/liquid separators shall be pumped back to tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall conduct quarterly gas sampling of tank vapor space and vapor control system piping and components. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
13. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
15. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
16. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
17. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
18. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
19. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
20. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
21. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
22. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
23. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
24. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after minimization. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
25. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
27. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
28. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. The permittee shall keep accurate records of VOC content of vapors for a period of 5 years and shall make such records available for District inspection upon requests. [District Rule 4623]
31. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

INSPECTION
EXPIRATION DATE: 05/31/2021
WORKSHEET

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC

MAILING ADDRESS: 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

INSPECT PROGRAM PARTICIPANT: NO

EQUIPMENT DESCRIPTION:

5,000 BBL REJECT TANK (#77) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-128

CONDITIONS

1. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid, tank may be disconnected from vapor control system and may be open. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be connected to vapor control system and is subject to normal leak free requirements. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Pressure/vacuum relief valves shall be set to open at 2 oz./square inch pressure and 0.5 oz./square inch vacuum. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Vapor compressor shall activate whenever tank internal pressure exceeds 2 oz./square inch. [District Rule 2201] Federally Enforceable Through Title V Permit
8. True vapor pressure (TVP) of any liquid placed, stored or held in the tank shall not exceed 1.60 psia. [District Rule 2201] Federally Enforceable Through Title V Permit
9. There shall be no truck loading or unloading at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Facility piping system shall be routinely inspected for leaks and all leaks shall be promptly repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Vapor control system efficiency shall be maintained at no less than 99% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Vapor collection system shall not discharge to atmosphere except during breakdown conditions pursuant to Rule 1100. [District Rule 1100] Federally Enforceable Through Title V Permit
13. Liquids from gas/liquid separators shall be pumped back to tanks. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Throughput shall not exceed 100 bbl per day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. VOC emission rate shall not exceed 0.01 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
16. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit

17. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
18. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
19. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
20. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
21. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
22. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
23. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
24. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
25. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
26. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
27. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
28. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of the District Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
29. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

30. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
31. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. Operator shall maintain monthly records of daily average throughput. [District Rule 2520] Federally Enforceable Through Title V Permit
33. {463} Operator shall maintain all records for at least five years and conform to the recordkeeping requirements described in District Rule 2520. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
34. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Tank emissions are fugitive emissions not considered to come from a point source. Therefore, the requirements of Rule 4801 (Amended 12/17/92) and 40 CFR Part 60 Subparts K, Ka, and Kb do not apply to this source. A permit shield is granted from these requirements [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-139-12

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

10.0 MMBTU/HR NATURAL GAS/LPG FIRED HEATER TREATER #1 (#25118) WITH TWO 5 MMBTU/HR KVAERNER-ZINK LOW NOX FORCED DRAFT BURNERS AND FLUE GAS RECIRCULATION, FUEL INDUCED FLUE GAS RECIRCULATION, TWO STACKS AND PLC AUTOMATED CONTROLS

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. All fuel supply lines to this unit shall be permanently disconnected. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rules 4306 and 4320. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Emissions from the natural gas/LPG-fired unit shall not exceed either of the following limits: 30 ppmvd NO_x @ 3% O₂ or 0.036 lb-NO_x/MMBtu, and 150 ppmvd CO @ 3% O₂ or 0.11 lb-CO/MMBtu. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
6. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. If the unit is fired on non-certified liquid fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the liquid fuel being fired in the unit shall be determined using ASTM D 2880-71. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
11. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
12. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
13. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rule 108.1 (Kern) and 404 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
17. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-142-7

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-77
WITH TWO PERMIT EXEMPT BURNERS (PEER-11)

PERMIT UNIT REQUIREMENTS

1. The heater treater shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This heater treater shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2080] Federally Enforceable Through Title V Permit
4. The VOC content of heater treater vapor recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this heater treater shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The heater treater shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Rule 4623 Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall conduct quarterly gas sampling for the heater treater to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-143-9

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-77
WITH TWO PERMIT EXEMPT BURNERS (PEER-12)

PERMIT UNIT REQUIREMENTS

1. The heater treater shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This heater treater shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2080] Federally Enforceable Through Title V Permit
4. The VOC content of heater treater vapor recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this heater treater shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The heater treater shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Rule 4623 Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall conduct quarterly gas sampling for the heater treater to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-144-9

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-77
WITH TWO PERMIT EXEMPT BURNERS (PEER-13)

PERMIT UNIT REQUIREMENTS

1. The heater treater shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This heater treater shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2080] Federally Enforceable Through Title V Permit
4. The VOC content of heater treater vapor recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this heater treater shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The heater treater shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Rule 4623 Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall conduct quarterly gas sampling for the heater treater to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-146-9

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

8 MMBTU/HR NATURAL GAS FIRED HEATER TREATER OPERATING AS AN UNFIRED FREE WATER KNOCKOUT (#2) (#10290)

PERMIT UNIT REQUIREMENTS

1. The fuel supply line shall be physically disconnected from this burner. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
2. This burner shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rules 4305 and 4306 and all other applicable District regulations. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
3. If continuous operation oxygen analyzer/controller is utilized, excess O₂ shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rule 108.1 (Kern)] Federally Enforceable Through Title V Permit
6. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
11. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rule 108.1 (Kern) and 404 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
13. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-186-10

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

GASOLINE DISPENSING OPERATION WITH ONE 10,000 GALLON FIREGUARD ABOVEGROUND STORAGE TANK SERVED BY OPW EVR PHASE I VAPOR RECOVERY SYSTEM (VR-401-C), STANDING LOSS CONTROL (VR-301-F), AND TWO FUELING POINTS WITH TWO GASOLINE DISPENSING NOZZLES SERVED BY BALANCE PHASE II VAPOR RECOVERY SYSTEM (G-70-162-A)

PERMIT UNIT REQUIREMENTS

1. The Phase I, Phase II, and Standing Loss Control Vapor recovery systems shall be installed and maintained in accordance with the manufacturer specifications and the ARB Executive Orders specified in this permit, including applicable rules and regulations of the Division of Measurement Standards of the Department of Food and Agriculture, the Office of the State Fire Marshal of the Department of Forestry and Fire Protection, the Division of Occupational Safety and Health of the Department of Industrial Relations, and the Division of Water Quality of the State Water Resources Control Board that have been made conditions of the certification. [District Rules 4621 and 4622 and CH&SC 41950] Federally Enforceable Through Title V Permit
2. This gasoline storage and dispensing equipment shall not be used in retail sales, where gasoline dispensed by the unit is subject to payment of California sales tax on gasoline sales. [District Rule 4622] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102] Federally Enforceable Through Title V Permit
4. The storage container(s) shall be installed, maintained, and operated such that they are leak-free. [District Rule 4621] Federally Enforceable Through Title V Permit
5. The Phase I and Phase II vapor recovery systems and gasoline dispensing equipment shall be maintained without leaks as determined in accordance with the test method specified in this permit. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
6. A leak is defined as the dripping of VOC-containing liquid at a rate of more than three (3) drops per minute, or the detection of any gaseous or vapor emissions with a concentration of total organic compound greater than 10,000 ppmv, as methane, above background when measured in accordance with EPA Test Method 21. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
7. No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo container, which attest to the vapor integrity of the container. [District Rule 4621] Federally Enforceable Through Title V Permit
8. No person shall operate any ARB certified Phase II vapor recovery system or any portion thereof that has a major defect or an equipment defect that is identified in any applicable ARB Executive Order until the following conditions have been met: 1) the defect has been repaired, replaced, or adjusted as necessary to correct the defect; 2) the District has been notified, and the District has reinspected the system or authorized the system for use (such authorization shall not include the authority to operate the equipment prior to the correction of the defective components); and 3) all major defects, after repair, are duly entered into the Operations and Maintenance (O&M) manual. [District Rule 4622] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon identification of any major defects, the permittee shall tag "Out-of-Order" all dispensing equipment for which vapor recovery has been impaired. Tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defective equipment has been repaired, replaced, or adjusted, as necessary. In the case of defects identified by the District, tagged equipment shall be rendered inoperable, and the tag shall not be removed until the District has been notified of the repairs, and the District has either reinspected the system or authorized the tagged equipment for use. [District Rule 4622] Federally Enforceable Through Title V Permit
10. The permittee shall implement a periodic maintenance inspection program for the certified Phase II vapor recovery system consistent with the requirements of this permit. The program shall be documented in an operation and maintenance (O&M) manual and shall at a minimum contain the following information: 1) copies of all vapor recovery performance tests; 2) all applicable ARB Executive Orders, Approval Letters, and District Permits; 3) the manufacturer's specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer; 4) system and/or component testing requirements, including test schedules and passing criteria for each of the standard tests required by this permit (the owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements), and 5) additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit conditions, including replacement schedules for failure or wear prone components. [District Rule 4622] Federally Enforceable Through Title V Permit
11. The permittee shall conduct periodic maintenance inspections based on the greatest monthly throughput of gasoline dispensed by the facility in the previous year as follows: A) less than 2,500 gallons - one day per month; B) 2,500 to less than 25,000 gallons - one day per week; or C) 25,000 gallons or greater - five days per week. All inspections shall be documented within the O & M Manual. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
12. Periodic maintenance inspections of the Phase I vapor recovery system shall include, at a minimum, verification that 1) the fill caps and vapor caps are not missing, damaged, or loose; 2) the fill cap gasket and vapor cap gaskets are not missing or damaged; 3) the fill adapter and vapor adapter are securely attached to the risers; 4) where applicable, the spring-loaded submerged fill tube seals properly against the coaxial tubing; 5) the dry break (poppet-valve) is not missing or damaged; and 6) the submerged fill tube is not missing or damaged. [District Rule 4621] Federally Enforceable Through Title V Permit
13. Periodic maintenance inspections of the Phase II vapor recovery system shall include, at a minimum, verification that 1) the following nozzle components are in place and in good condition as specified in ARB Executive Order as applicable: faceplate/facecone, bellows, latching device spring, vapor check valve, spout (proper diameter/vapor collection holes), insertion interlock mechanism, automatic shut-off mechanism, and hold open latch (unless prohibited by law or the local fire control authority); 2) the hoses are not torn, flattened or crimped; 3) the vapor path of the coaxial hoses associated with bellows equipped nozzles does not contain more than 100 ml of liquid if applicable; and 4) the vapor processing unit is functioning properly, for operations that are required to have or possess such a unit. [District Rule 4622] Federally Enforceable Through Title V Permit
14. In the event of a separation due to a drive off, the permittee shall, unless otherwise specified in the applicable ARB Executive Order, conduct a visual inspection of the affected equipment and either 1) perform qualified repairs on any damaged components and conduct applicable re-verification tests pursuant to the requirements of this permit, or 2) replace the affected nozzles, coaxial hoses, breakaway couplings, and any other damaged components with new or certified rebuilt components that are ARB certified. The activities shall be documented in accordance with the requirements of this permit before placing the affected equipment back in service. [District Rule 4622] Federally Enforceable Through Title V Permit
15. The gasoline throughput for this permit unit shall not exceed 480,000 gallons in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The permittee shall conduct all periodic vapor recovery system performance tests specified in this permit, no more than 30 days before or after the required compliance testing date, unless otherwise required under the applicable ARB Executive Order. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

17. A person conducting testing of, or repairs to, a certified vapor recovery system shall be in compliance with District Rule 1177 (Gasoline Dispensing Facility Tester Certification). [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
18. A person performing installation of, or maintenance on, a certified Phase I or Phase II vapor recovery system shall be certified by the ICC for Vapor Recovery System Installation and Repair, or work under the direct and personal supervision of an individual physically present at the work site who is certified. The ICC certification shall be renewed every 24 months. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
19. Proof of the ICC certification and all other certifications required by the Executive Order and installation and operation manual shall be made available onsite. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
20. The permittee shall notify the District at least 7 days prior to each performance test. The test results shall be submitted to the District no later than 30 days after the completion of each test. [District Rule 4621] Federally Enforceable Through Title V Permit
21. The permittee shall maintain a copy of all test results. The test results shall be dated and shall contain the name, address, and telephone number of the company responsible for system installation and testing. [District Rule 4622] Federally Enforceable Through Title V Permit
22. The permittee shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name and applicable certification numbers of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was installed as replacement, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs. [District Rule 4622] Federally Enforceable Through Title V Permit
23. The O&M manual shall be kept at the dispensing operation and made available to any person who operates, inspects, maintains, repairs, or tests the equipment at the operation as well as to District personnel upon request. [District Rule 4622] Federally Enforceable Through Title V Permit
24. The permittee shall maintain monthly and annual gasoline throughput records. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit
25. All records required by this permit shall be retained on-site for a period of at least five years and shall be made available for District inspection upon request. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-187-16

EXPIRATION DATE: 05/31/2021

SECTION: NW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3.0 MW COGEN FACILITY INCLUDING SOLAR CENTAUR MODEL T4701 GAS FIRED TURBINE ENGINE GENERATOR SET WITH INLET AIR EVAPORATIVE COOLER, GAS FIRED 31 MMBTU/HR MAXFIRE MODEL 110 SERIES DUCT BURNER, HEAT RECOVERY STEAM GENERATOR, SCR, AND KOCH COALESCER

PERMIT UNIT REQUIREMENTS

1. Gas turbine engine shall be equipped with water injection system. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine/duct burner system shall be equipped with recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Duct burner fuel gas supply shall be equipped with an operational injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Gas turbine engine shall not be operated when water or ammonia injection or SCR system is not operating. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Cogeneration unit shall be equipped with selective catalytic reduction. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NOx concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
8. Permittee shall operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit
9. Exhaust shall be equipped with provisions for sampling ammonia concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Ammonia emissions shall not exceed 20 ppmv @ 15% O2. [District Rule 4102]
11. Heat input to gas turbine engine/duct burner system shall not exceed 74.81 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Gas turbine engine and duct burner combined emission rates shall not exceed: 0.00285 lb-SOx/MMBtu, 0.0066 lb-PM10/MMBtu, 0.0021 lb-VOC/MMBtu (as methane). [District Rule 2201] Federally Enforceable Through Title V Permit
13. Except during transitional periods, gas turbine engine and duct burner combined emission rates shall not exceed 5 ppmv NOx (as NO2) @ 15% O2 (0.0184 lb/MMBtu) nor 200 ppmv CO @ 15% O2 (0.4484 lb/MMBtu). [District Rules 2201 and 4703, 5.1.3 and 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Transitional period emissions shall not exceed: 35 ppmv NO_x (as NO₂) @ 15% O₂ (0.1289 lb/MMBtu), 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703, 3.29] Federally Enforceable Through Title V Permit
16. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.26] Federally Enforceable Through Title V Permit
17. Transitional Period is defined as any of the following: bypass transition period, primary re-ignition period, reduced load period, start-up or shutdown. [District Rule 4703, 3.33] Federally Enforceable Through Title V Permit
18. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during each transitional operation period. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
19. Gas turbine engine and duct burner shall only be fired on PUC quality or equivalent sulfur content natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
21. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
22. Source testing to demonstrate compliance with NO_x and CO emission limits shall be conducted annually. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
23. For source testing, NO_x emissions shall be averaged using consecutive 15-minute sampling periods over a three-hour period. [District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
24. Oxides of nitrogen emissions for compliance tests shall be determined by using EPA Method 7E or EPA Method 20. [District Rule 4703, 6.4.1] Federally Enforceable Through Title V Permit
25. Carbon monoxide emissions for compliance tests shall be determined by using EPA Test Methods 10 or 10B. [District Rule 4703, 6.4.2] Federally Enforceable Through Title V Permit
26. Oxygen content of the exhaust gas shall be determined by using EPA Methods 3, 3A, or 20. [District Rule 4703, 6.4.3] Federally Enforceable Through Title V Permit
27. The HHV and LHV of gaseous fuels shall be determined by using ASTM D3588-91, ASTM 1826-88, or ASTM 1945-81. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
28. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
29. The District must be notified 30 days prior to any compliance source testing and the owner shall submit a source test plan for District approval 15 days prior to source sampling. [District Rules 1081, 7.1 and 4703, 6.3] Federally Enforceable Through Title V Permit
30. Source testing shall be witnessed or authorized by District personnel, and the source test results shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.2 and 4703, 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

31. The permittee shall monitor and record the stack concentration of NO_x, CO, O₂, and NH₃ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
32. If the NO_x, CO, O₂, and/or NH₃ concentrations, as measured by the permittee with a portable analyzer exceed the permitted emission limits, the permittee shall notify the District and return the NO_x, CO, O₂, and NH₃ concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emission limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
33. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NO_x output. [District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit
34. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
35. Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
36. Any one-hour period during which the average water-to-fuel ratio, as measured by the predictive monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
37. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used (liquid/gas). [District Rule 4703, 6.2.6] Federally Enforceable Through Title V Permit
39. The operator performing start-up or shutdown of a unit shall keep records of the duration of start-up or shutdown. [District Rule 4703, 6.2.8] Federally Enforceable Through Title V Permit
40. Permittee shall keep accurate daily records of the quantity and heating value (btu/scf) of the fuel gas supplied to the gas turbine engine/duct burner system. [District Rule 2201] Federally Enforceable Through Title V Permit
41. The ammonia injection rate in (lb/hour) shall be recorded daily. [40 CFR 64.3] Federally Enforceable Through Title V Permit
42. The owner or operator shall maintain all records for a period of five years from the date of data entry and shall make such records available to the APCO upon request. [District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit
43. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

44. A cogeneration facility which commenced construction prior to November 15, 1990, and was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale, is not an affected unit subject to the requirements of the Acid Rain Program. Therefore, the requirements of 40 CFR 72 do not apply to this source. A permit shield is granted from this requirement. [40 CFR 72.6(b)(4)(i) and District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-188-15

EXPIRATION DATE: 05/31/2021

SECTION: NW 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3.0 MW COGEN FACILITY INCLUDING SOLAR CENTAUR MODEL T4701 GAS FIRED TURBINE ENGINE GENERATOR SET WITH INLET AIR EVAPORATIVE COOLER, GAS FIRED 31 MMBTU/HR MAXFIRE MODEL 110 SERIES DUCT BURNER, HEAT RECOVERY STEAM GENERATOR, SCR, AND KOCH COALESCER

PERMIT UNIT REQUIREMENTS

1. Gas turbine engine shall be equipped with water injection system. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Gas turbine engine shall be equipped with continuously recording water injection rate monitor accurate to within +/- 5%. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine/duct burner system shall be equipped with recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Duct burner fuel gas supply shall be equipped with an operational injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Gas turbine engine shall not be operated when water or ammonia injection or SCR system is not operating. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Cogeneration unit shall be equipped with selective catalytic reduction. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall operate and maintain in calibration a predictive emissions monitoring system which continuously measures and records the water-to-fuel ratio and which correlates the water-to-fuel ratio with the NO_x concentration in the exhaust by using the method described in 40 CFR 60.335(c). [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
8. Permittee shall operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit
9. Exhaust shall be equipped with provisions for sampling ammonia concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Ammonia emissions shall not exceed 20 ppmv @ 15% O₂. [District Rule 4102]
11. Heat input to gas turbine engine/duct burner system shall not exceed 74.81 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Gas turbine engine and duct burner combined emission rates shall not exceed: 0.00285 lb-SO_x/MMBtu, 0.0066 lb-PM₁₀/MMBtu, 0.0021 lb-VOC/MMBtu (as methane). [District Rule 2201] Federally Enforceable Through Title V Permit
13. Except during transitional periods, gas turbine engine and duct burner combined emission rates shall not exceed 5 ppmv NO_x (as NO₂) @ 15% O₂ (0.0184 lb/MMBtu) nor 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703, 5.1.3 and 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Transitional period emissions shall not exceed: 35 ppmv NO_x (as NO₂) @ 15% O₂ (0.1289 lb/MMBtu), 200 ppmv CO @ 15% O₂ (0.4484 lb/MMBtu). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
15. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703, 3.29] Federally Enforceable Through Title V Permit
16. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.26] Federally Enforceable Through Title V Permit
17. Transitional Period is defined as any of the following: bypass transition period, primary re-ignition period, reduced load period, start-up or shutdown. [District Rule 4703, 3.33] Federally Enforceable Through Title V Permit
18. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during each transitional operation period. [District Rule 4703, 5.3.2] Federally Enforceable Through Title V Permit
19. Gas turbine engine and duct burner shall only be fired on PUC quality or equivalent sulfur content natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
20. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit
21. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
22. Source testing to demonstrate compliance with NO_x and CO emission limits shall be conducted annually. [District Rule 4703, 6.3.1] Federally Enforceable Through Title V Permit
23. For source testing, NO_x emissions shall be averaged using consecutive 15-minute sampling periods over a three-hour period. [District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
24. Oxides of nitrogen emissions for compliance tests shall be determined by using EPA Method 7E or EPA Method 20. [District Rule 4703, 6.4.1] Federally Enforceable Through Title V Permit
25. Carbon monoxide emissions for compliance tests shall be determined by using EPA Test Methods 10 or 10B. [District Rule 4703, 6.4.2] Federally Enforceable Through Title V Permit
26. Oxygen content of the exhaust gas shall be determined by using EPA Methods 3, 3A, or 20. [District Rule 4703, 6.4.3] Federally Enforceable Through Title V Permit
27. The HHV and LHV of gaseous fuels shall be determined by using ASTM D3588-91, ASTM 1826-88, or ASTM 1945-81. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
28. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
29. The District must be notified 30 days prior to any compliance source testing and the owner shall submit a source test plan for District approval 15 days prior to source sampling. [District Rules 1081, 7.1 and 4703, 6.3] Federally Enforceable Through Title V Permit
30. Source testing shall be witnessed or authorized by District personnel, and the source test results shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.2 and 4703, 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

31. The permittee shall monitor and record the stack concentration of NO_x, CO, O₂, and NH₃ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
32. If the NO_x, CO, O₂, and/or NH₃ concentrations, as measured by the permittee with a portable analyzer exceed the permitted emission limits, the permittee shall notify the District and return the NO_x, CO, O₂, and NH₃ concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emission limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
33. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NO_x output. [District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit
34. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
35. Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
36. Any one-hour period during which the average water-to-fuel ratio, as measured by the predictive monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c), 40 CFR 64] Federally Enforceable Through Title V Permit
37. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. The owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local start-up time and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used (liquid/gas). [District Rule 4703, 6.2.6] Federally Enforceable Through Title V Permit
39. The operator performing start-up or shutdown of a unit shall keep records of the duration of start-up or shutdown. [District Rule 4703, 6.2.8] Federally Enforceable Through Title V Permit
40. Permittee shall keep accurate daily records of the quantity and heating value (btu/scf) of the fuel gas supplied to the gas turbine engine/duct burner system. [District Rule 2201] Federally Enforceable Through Title V Permit
41. The ammonia injection rate in (lb/hour) shall be recorded daily. [40 CFR 64.3] Federally Enforceable Through Title V Permit
42. The owner or operator shall maintain all records for a period of five years from the date of data entry and shall make such records available to the APCO upon request. [District Rule 4703, 6.2.4] Federally Enforceable Through Title V Permit
43. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

44. A cogeneration facility which commenced construction prior to November 15, 1990, and was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale, is not an affected unit subject to the requirements of the Acid Rain Program. Therefore, the requirements of 40 CFR 72 do not apply to this source. A permit shield is granted from this requirement. [40 CFR 72.6(b)(4)(i) and District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-194-17

EXPIRATION DATE: 05/31/2021

SECTION: SE36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

5.0 MW COGEN FACILITY INCLUDING SOLAR TAURUS MODEL 60-T73005 GAS FIRED TURBINE ENGINE GENERATOR SET WITH SOLONOX COMBUSTORS, GAS FIRED MAXFIRE MODEL 110 SERIES DUCT BURNER, SCR, AND HEAT RECOVERY STEAM GENERATOR

PERMIT UNIT REQUIREMENTS

1. Lube oil vent relief valve emission rate shall not exceed PM10: 0.09 lb/hr, and VOC: 0.09 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Except during periods of startup and shutdown, gas turbine engine and duct burner combined emission rates shall not exceed 5 ppmv NOx (as NO2) @ 15% O2 (0.0184 lb/MMBtu) nor 200 ppmv CO @ 15% O2 (0.4484 lb/MMBtu). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
3. Gas turbine engine and duct burner combined emission rates shall not exceed: 0.00285 lb-SOx/MMBtu, 0.0066 lb-PM10/MMBtu, 0.0021 lb-VOC/MMBtu (as methane). [District Rule 2201] Federally Enforceable Through Title V Permit
4. Start-up and Shutdown emissions shall not exceed: 25 ppmv NOx (as NO2) @ 15% O2 (0.0921 lb/MMBtu), 200 ppmv CO @ 15% O2 (0.4484 lb/MMBtu). [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
5. Ammonia emissions shall not exceed 20 ppmv @ 15% O2. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Gas turbine engine start-up is that period of time not exceeding two hours in duration during which the unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
7. Gas turbine engine shutdown is that period of time not exceeding two hours in duration during which the unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
8. Transitional Period is defined as any of the following: bypass transition period, primary re-ignition period, reduced load period, start-up or shutdown. [District Rule 4703, 3.33] Federally Enforceable Through Title V Permit
9. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during each period of start-up or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Gas turbine engine and duct burner shall only be fired on PUC quality or equivalent sulfur content natural gas. [District Rule 2201 and 40 CFR 60.333(a) & (b);60.332(a)] Federally Enforceable Through Title V Permit
11. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 3031, D 4084 or D 3246. [40 CFR 60.335(d)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit
13. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
14. The HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
15. Nitrogen oxides (NO_x) concentrations shall be determined using EPA Method 7E, 20, or ARB Method 100; CO using EPA Method 10 or ARB Method 100; and oxygen (O₂) using EPA Method 3, 3A, 20, or ARB Method 100. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit
16. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b) and District Rule 4703, 6.3.2] Federally Enforceable Through Title V Permit
17. Permittee shall submit to the APCO the information correlating the control system operating parameters to the associated measured NO_x output. [District Rule 4703, 6.2.2] Federally Enforceable Through Title V Permit
18. Permittee shall operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
19. Permittee shall operate, monitor and maintain the SoLoNO_x lean pre-mixed combustion system in full accordance with manufacturer's recommendations. [40 CFR 60.334; District Rule 4703, 6.2.2 and 6.2.5] Federally Enforceable Through Title V Permit
20. Operator shall submit a semiannual report listing any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8% by weight. [40 CFR 60.334(c)(2)] Federally Enforceable Through Title V Permit
21. Permittee shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form to the APCO semiannually, except when more frequent reporting is specifically required by an applicable subpart. All reports shall be postmarked by the 30th day of each calendar half (or quarter, as appropriate). [40 CFR 60.7(c)] Federally Enforceable Through Title V Permit
22. Gas turbine lube oil system atmospheric vent shall be equipped with aerosol/smoke control provisions. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Exhaust shall be equipped with provisions for sampling ammonia concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NO_x, CO, O₂, and NH₃ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. If the NO_x, CO, O₂, and/or NH₃ concentrations, as measured by the permittee with a portable analyzer exceed the permitted emission limits, the permittee shall notify the District and return the NO_x, CO, O₂, and NH₃ concentrations to the permitted emission limits as soon as possible but no longer than eight (8) hours after detection. If the permittee's portable analyzer readings continue to exceed the permitted emission limits after eight (8) hours, the permittee shall notify the District within the following one (1) hour, and conduct a certified source test within 60 days to demonstrate compliance with permitted emissions limits. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4703] Federally Enforceable Through Title V Permit
26. Gas turbine engine/duct burner system shall be equipped with recording fuel gas flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Heat input to gas turbine engine/duct burner system shall not exceed 78.34 MMBtu/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Gas turbine engine shall not be operated when ammonia injection or SCR system is not operating. [District Rule 2201] Federally Enforceable Through Title V Permit
29. NO_x and CO emissions shall be measured annually pursuant to requirements of Rule 4703 by District witnessed sample collection by independent laboratory corrected to 15% O₂ (dry). Test results shall be submitted within 60 days. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
30. For source testing, NO_x emissions shall be averaged using consecutive 15-minute sampling periods over a three-hour period. [District Rule 4703, 5.1] Federally Enforceable Through Title V Permit
31. Operator shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit
32. Duct burner fuel gas supply shall be equipped with injection pressure indicator. [District Rule 1070] Federally Enforceable Through Title V Permit
33. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
34. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
35. Permittee shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation, quantity of fuel used, and duration of all start-up and shutdown periods. [40 CFR 60.332(a),(b) and District Rule 4703, 6.2.6, 6.2.8] Federally Enforceable Through Title V Permit
36. Permittee shall keep accurate daily records of the quantity and heating value (btu/scf) of the fuel gas supplied to the gas turbine engine/duct burner system. [District Rule 2201] Federally Enforceable Through Title V Permit
37. A cogeneration facility which commenced construction prior to November 15, 1990, and was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale, is not an affected unit subject to the requirements of the Acid Rain Program. Therefore, the requirements of 40 CFR 72 do not apply to this source. A permit shield is granted from this requirement. [40 CFR 72.6(b)(4)(i) and District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. The following types of units are not affected units subject to the requirements of the Acid Rain Program: 1) A simple combustion turbine that commenced operation before November 15, 1990, 2) Any unit that, during 1985, did not serve a generator that produced electricity for sale and that did not, as of November 15, 1990, and does not currently, serve a generator that produces electricity for sale, 3) A cogeneration facility which for a unit that commenced construction prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 Mwe-hrs actual electric output on an annual basis to any utility power distribution system for sale. Therefore, the requirements of 40 CFR 72.6 do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rule 1081, 4201, 3.1; Rules 406 (Fresno), 407 (Kings, San Joaquin, Stanislaus, Tulare, Merced, and Kern), and 404(Madera); 40 CFR 60.332(c), (d); 60.334 (b), and (c)(2); 60.335(d). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern and Stanislaus), and 110 (Madera); Rules 402 (Madera) and 404 (Fresno, Kern, Kings, San Joaquin, Merced, Stanislaus, Tulare); 40 CFR 60.332 (a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335 (a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
41. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-209-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#010554) AND ONE FREE WATER KNOCKOUT VESSEL (GAMBLE LEASE), EACH WITH A VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1372-210, '-211, '-212, AND '-213, AND VENTED TO TEOR OPERATION S-1372-100

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
3. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NOx); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NOx when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
6. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-210-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#010555) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
3. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
6. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-211-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#006798) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
3. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
4. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
6. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-212-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10664) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
3. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
6. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-213-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,520 BBL FIXED ROOF CRUDE OIL STORAGE/ CLARIFIER TANK WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
3. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
6. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-214-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

250 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#GD-TK-1) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
3. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
4. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-100-35. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [District Rule 17 CCR 95671(f)(1)(2)(3)]
5. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
6. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-215-3

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #10695 AND ONE FREE WATER KNOCKOUT VESSEL (MCFEE LEASE)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-216-3

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10694)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-217-3

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10716)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-218-7

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#10602) (HOPKINS LEASE) WITH VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1372-235, '-256, '-257, '-419, '-420, AND '-421 VENTING TO STEAM GENERATORS S-1372-18, '-31, AND TEOR SYSTEM S-1372-316

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices taken out of service, the vapors may be vented to the standby flare listed on permit S-1372-316. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. The permittee shall conduct API gravity testing upon initial start-up. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
10. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
12. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
14. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-219-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

250 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#8472)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-220-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#8707) WITH VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1372-221, '-416, AND '-441 VENTED TO CASING VAPOR COLLECTION SYSTEM LISTED ON S-1372-100 (STAR FEE)

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-100. [17 CCR 95668]
4. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices out of service, the vapors may be vented to the standby flare listed on permit S-1372-100. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with 17 CCR Section 95671 is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-221-4

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,600 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10602) CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-220 (STAR FEE)

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-220. [17 CCR 95668]
4. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices out of service, the vapors may be vented to the standby flare listed on permit S-1372-100. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with 17 CCR Section 95671 is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

INSPECTION
WORKSHEET
EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC

MAILING ADDRESS: 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

PHYSICAL LOCATION: Welpport Lease

INSPECT PROGRAM PARTICIPANT: NO

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#6799)

CONDITIONS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-224-4

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10635)

PERMIT UNIT REQUIREMENTS

1. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid and tank may be open. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be enclosed with no openings or holes. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
8. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
9. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
11. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-225-4

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10646)

PERMIT UNIT REQUIREMENTS

1. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid and tank may be open. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be enclosed with no openings or holes. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
7. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
8. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
9. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
11. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-226-4

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF CRUDE OIL STORAGE/ CLARIFIER TANK AND THREE FREE WATER KNOCKOUT VESSELS

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-227-3

EXPIRATION DATE: 05/31/2021

SECTION: 36 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

1,628 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#TK-1)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-235-5

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#010766) (HOPKINS LEASE) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON '18

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The permittee shall conduct API gravity testing upon initial start-up. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
11. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
13. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
15. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
16. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-246-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #10357 AND FIVE FREE WATER KNOCKOUT VESSELS (BREMER LEASE) COMPRESSORS, VAPOR RECOVERY SYSTEM SHARED WITH S-1372-247, '-248, '-249, '-250, '-251, '-252, '-253, '-254, '-255, AND '-258, PIPING ROUTED TO DOGGR APPROVED WELLS OR SENT OFFSITE TO INSTALL VAPOR RECOVERY SYSTEM

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Collected vapors shall be discharged only to DOGGR approved waste gas injection wells, or sent offsite to steam generator S-1114-10. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
10. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
11. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
12. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
14. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
15. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
16. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
17. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
18. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
19. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC**MAILING ADDRESS:** 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309**LOCATION:** HEAVY OIL WESTERN STATIONARY SOURCE
CA**SECTION:** 16 **TOWNSHIP:** 30S **RANGE:** 22E**PHYSICAL LOCATION:** Bremer Lease**INSPECT PROGRAM PARTICIPANT:** NO**EQUIPMENT DESCRIPTION:**

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10413) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

CONDITIONS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
11. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
13. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
14. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
16. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-248-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10336) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
11. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
13. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
14. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
16. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-249-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10337) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
11. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
13. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
14. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
16. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-250-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10358) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
11. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
13. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
14. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 6.2.2] Federally Enforceable Through Title V Permit
16. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-251-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10356) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
11. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
13. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
14. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
16. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-252-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10420) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
11. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
13. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
14. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
16. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-253-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10421) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
11. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
13. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
14. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
16. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-254-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,023 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBWT-1) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
11. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
13. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
14. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
16. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-255-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

10,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBWT-2) VENTED TO VAPOR CONTROL SYSTEM S-1372-77 (BREMER LEASE) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. A leak-free condition is defined as a condition without a gas or liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Tank shall be vented only to vapor recovery system listed on S-1372-77. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. Maximum VOC content of tank vapor shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
8. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Any component found to be leaking by the operator on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Permittee shall maintain a written record of VOC content of tank vapor. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-256-5

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#UBFT-1) (HOPKINS LEASE) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON '218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The permittee shall conduct API gravity testing upon initial start-up. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
11. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
13. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
15. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
16. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-257-5

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#EBFT-1) (HOPKINS LEASE) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON '218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The permittee shall conduct API gravity testing upon initial start-up. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
11. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
13. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
15. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
16. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-258-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBFT-1) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
10. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
11. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
12. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
13. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
14. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
15. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
16. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
17. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
18. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-259-5

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBST-1)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-263-7

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL RECEIVING TANK WITH GAS BOOT (#10757) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370

PERMIT UNIT REQUIREMENTS

1. VOC's collected from tank shall vent only to vapor control system S-1372-370. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
6. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
7. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
8. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
9. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
10. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
12. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
13. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
14. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv from vapor control system components (downstream of control valve between vessel and vapor control system piping) shall be reported as a deviation [District Rules 2201 and 4623, 6.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-264-7

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,500 BBL FIXED ROOF CRUDE OIL WASH TANK (#1500WT) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370

PERMIT UNIT REQUIREMENTS

1. VOC's collected from tank shall vent only to vapor control system S-1372-370. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
3. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
4. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
5. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
6. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
7. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
9. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
11. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv from vapor control system components (downstream of control valve between vessel and vapor control system piping) shall be reported as a deviation [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-265-7

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL LACT SHIPPING TANK (#10755) SERVED BY VAPOR RECOVERY SYSTEM
LISTED ON PERMIT UNIT S-1372-370

PERMIT UNIT REQUIREMENTS

1. VOC's collected from tank shall vent only to vapor control system S-1372-370. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
3. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
4. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
5. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
6. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
7. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
9. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
11. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv from vapor control system components (downstream of control valve between vessel and vapor control system piping) shall be reported as a deviation [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-266-5

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#500VR-1)

PERMIT UNIT REQUIREMENTS

1. The true vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 4623, 2.0 and 2010] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-267-7

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#1000WT) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370

PERMIT UNIT REQUIREMENTS

1. VOC's collected from tank shall vent only to vapor control system S-1372-370. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
6. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
7. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
8. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
9. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
10. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
12. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
13. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
14. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv from vapor control system components (downstream of control valve between vessel and vapor control system piping) shall be reported as a deviation [District Rules 2201 and 4623, 6.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-268-7

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF WASTE WATER STORAGE TANK (#1000WW-T) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370

PERMIT UNIT REQUIREMENTS

1. VOC's collected from tank shall vent only to vapor control system S-1372-370. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of tank vapor space and vapor control system piping and components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of gas shall be measured using ASTM D-1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly gas sampling after TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
5. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
6. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
7. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
8. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
9. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
10. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
12. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
13. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
14. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv from vapor control system components (downstream of control valve between vessel and vapor control system piping) shall be reported as a deviation [District Rules 2201 and 4623, 6.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-270-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,500 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#5000WTR)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-271-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9935) AND ONE FREE WATER KNOCKOUT VESSEL
(TUMBADOR LEASE)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-272-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9934)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-273-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10370)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-274-4

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

250 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH SHARED VAPOR CONTROL SYSTEM (SUMP TANK, TUMBADOR LEASE)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor loss prevention system (PTO # S-1372-76) consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The true vapor pressure of any organic liquid introduced to the tank shall not exceed 1.5 psia at liquid temperature. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Operator shall determine the true vapor pressure of the petroleum liquid stored in the tank at least once per year in accordance with methods described in Section 6.2 of District Rule 4623 (Amended 12/17/92). Determinations shall be made annually during summer and whenever there is a change in the source or type of petroleum entering the tank. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. Operator shall keep accurate records of types of material diverted into sump tank, storage temperature, and true vapor pressure of liquids stored. [District Rule 2520, 9.4] Federally Enforceable Through Title V Permit
5. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
6. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
7. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
8. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
9. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
10. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
12. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
13. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-275-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #9936 AND ONE FREE WATER KNOCKOUT VESSEL (DOME LEASE)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-276-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9937)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-278-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10368)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-279-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

4,121 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#6500 WTR)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-280-3

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (FUEL TK.)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-284-3

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,628 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9143-WT)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-285-3

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10494)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-286-3

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#2731)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-289-4

EXPIRATION DATE: 05/31/2021

SECTION: 22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK #6928 WITH TWO FREE WATER KNOCKOUT VESSELS
(KEENE LEASE)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-292-3

EXPIRATION DATE: 05/31/2021

SECTION: 22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#1783)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-293-3

EXPIRATION DATE: 05/31/2021

SECTION: 22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#KW-SB-1)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-294-3

EXPIRATION DATE: 05/31/2021

SECTION: 22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#KW-C-1)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-312-15

EXPIRATION DATE: 05/31/2021

SECTION: SW22 **TOWNSHIP:** 32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

TEOR OPERATION INCLUDING 165 STEAM ENHANCED WELLS, WELL VENT VAPOR CONTROL SYSTEM, WELL COLLECTION PIPING, STANDBY FLARE, VAPOR PIPING TO S-1372-17 AND STANDBY FLARE, THREE-PHASE SEPARATORS, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, COMPRESSORS, LUBE OIL TANKS, AND PUMPS (KEENE-KELLY-SOUTH CERRITOS-WILLIAMS LEASES)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of TEOR gas shall be tested not less than quarterly thereafter. If compliance with the 10% VOC content limit has been demonstrated for 8 consecutive quarters, then the testing frequency shall be annually. If an annual source test fails to show compliance, quarterly testing shall resume. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Permittee shall maintain a written record of VOC content of the TEOR gas. [District Rule 2201 and District Rule 9.3.2] Federally Enforceable Through Title V Permit
7. Operation shall include sulfa check system, to be used when necessary to meet sulfur compounds limits of standby flare and steam generators S-1372-17. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The compressed gas knockout scrubber shall precede the steam generator S-1372-17 and standby flare. [District Rule NSR] Federally Enforceable Through Title V Permit
9. Standby flare shall only be used to incinerate TEOR vapors when steam generator permit S-1372-17 is inoperative. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Oxides of sulfur emissions shall not exceed 1578.1 lb/day as SO₂ from the following steam generators: S-1372-8, '17, '18, '19, '20, '-111 and standby flare S-1372-312. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall maintain accurate records of well casing vapor H₂S concentration (periodic sampling of no less than once per quarter) and daily volume of casing vapor incinerated. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
16. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
17. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
18. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
19. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
20. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
21. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
22. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
23. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
24. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit
26. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
27. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
28. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
29. Casing vapor collection system shall be equipped with vapor flowrate indicator/recorder downstream of condensible recovery system measuring total flowrate. [District Rule 2201 and 1070] Federally Enforceable Through Title V Permit
30. Collected condensate shall be discharged into production pipeline. [District Rule 2201] Federally Enforceable Through Title V Permit
31. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
32. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
33. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
35. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
36. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
37. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
38. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
39. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
40. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
41. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
42. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

43. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
44. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit
45. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit
46. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
47. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
48. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
49. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
50. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
51. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
52. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
53. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
54. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

55. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
56. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
57. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
58. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
59. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
60. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
61. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
62. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
63. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
64. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
65. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
66. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

67. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
68. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
69. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
70. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
71. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
72. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
73. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
74. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
75. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
76. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-313-3

EXPIRATION DATE: 05/31/2021

SECTION: 12NE **TOWNSHIP:** 28S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

500 BBL CRUDE OIL STORAGE TANK (TULARE W-T)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-314-3

EXPIRATION DATE: 05/31/2021

SECTION: 12NE **TOWNSHIP:** 28S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

500 BBL CRUDE OIL STORAGE TANK (UO 10600)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-315-3

EXPIRATION DATE: 05/31/2021

SECTION: 12NE **TOWNSHIP:** 28S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

500 BBL CRUDE OIL STORAGE TANK (UO 10601)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-316-21

EXPIRATION DATE: 05/31/2021

SECTION: NW10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

TEOR OPERATION SERVING 285 STEAM ENHANCED WELLS, WELL COLLECTION PIPING, FLARE, WELL VENT VAPOR CONTROL SYSTEM VAPOR PIPING TO FLARE, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, SCRUBBER, COMPRESSORS, LUBE OIL TANK AND SULFA TREAT SYSTEM (HOPKINS LEASE)

PERMIT UNIT REQUIREMENTS

1. Casing vapor collection system shall be equipped with vapor flowrate indicator/recorder downstream of condensible recovery system measuring total flowrate. [District Rule 2201] Federally Enforceable Through Title V Permit
2. TEOR gas shall only be incinerated in steam generators S-1372-1, '31, '319 or flare. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Steam generator #3, permit # S-1372-1, shall not operate when flare is incinerating TEOR waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Collected condensate shall be discharged into production pipeline. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of the collected well vent vapor shall not exceed 10% by weight. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
6. Emission rates from flare shall not exceed the following: PM10: 13.7 lb/MMscf, SO_x (as SO₂): 193.5 lb/day, NO_x (as NO₂): 140 lb/MMscf, VOC: 2.8 lb/MMscf, CO: 11.0 lb/MMscf. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The following test method shall be used for fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.3] Federally Enforceable Through Title V Permit
9. The flare in this permit shall be inspected every two weeks while in operation for visible emissions. If visible emissions are observed, corrective action shall be taken. If visible emissions continue, an EPA method 9 test shall be conducted within 72 hours. [District Rule 2520, 9.3.1] Federally Enforceable Through Title V Permit
10. Permittee shall maintain accurate records of well casing vapor H₂S concentration (periodic sampling of no less than once per quarter), daily volume of casing vapor incinerated and resulting daily SO₂ emissions. [District Rule 1070 and 2520, 9.4.1] Federally Enforceable Through Title V Permit
11. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
12. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. The flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit
14. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
15. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
16. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
17. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8] Federally Enforceable Through Title V Permit
18. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10] Federally Enforceable Through Title V Permit
19. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1, 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1] Federally Enforceable Through Title V Permit
20. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1] Federally Enforceable Through Title V Permit
21. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. The operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3] Federally Enforceable Through Title V Permit
23. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
24. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
25. Permittee shall maintain with the permit a current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit
27. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
28. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
29. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
30. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

31. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401] Federally Enforceable Through Title V Permit
32. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
33. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
34. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
35. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
36. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401] Federally Enforceable Through Title V Permit
37. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
38. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
39. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
40. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
41. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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42. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit
43. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401] Federally Enforceable Through Title V Permit
44. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
45. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401] Federally Enforceable Through Title V Permit
46. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401] Federally Enforceable Through Title V Permit
47. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
48. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
49. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
50. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
51. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
52. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
53. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
54. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
55. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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56. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
57. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
58. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit
59. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
60. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401] Federally Enforceable Through Title V Permit
61. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
62. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
63. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
64. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
65. Operator shall conduct quarterly sampling of the collected well vent vapor. If samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during period of normal operation, and not be within 48 hours after routine maintenance or repair. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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66. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit
67. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
68. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401] Federally Enforceable Through Title V Permit
69. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
70. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401] Federally Enforceable Through Title V Permit
71. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
72. The requirements of SJVUAPCD Rule 4407 (Adopted 5/19/94) and SJVUAPCD Rule 4801 (Adopted 12/17/92) do not apply to the well vents. For Rule 4801 applicability, well vent emissions are fugitive emissions not considered to come from a point source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-317-18

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

67.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR EQUIPPED WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE LOW NOX BURNER, FGR AND EXHAUST GAS SOX SCRUBBER W/ESP SHARED WITH S-1372-127 (MCKITTRICK FRONT LEASE)

PERMIT UNIT REQUIREMENTS

1. Unit shall be fired only on PUC quality natural gas or TEOR waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit
2. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of gas combusted in the unit shall be installed, utilized and maintained for each fuel line. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
3. Vapors from TEOR operation, permit # S-1372-100 may be incinerated in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Exhaust from unit shall be directed only to SO₂ scrubber/wet ESP listed on S-1372-127 except when burning PUC quality natural gas exclusively. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Scrubber/wet ESP listed on S-1372-127 shall be in operation when combusting TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit
7. This steam generator shall be exclusively fired on PUC quality natural gas when steam generators S-1372-13 and 24 are gas fired and incinerating TEOR waste gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306 and 4320] Federally Enforceable Through Title V Permit
9. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. SO_x (as SO₂) emissions from steam generator shall not exceed 180.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.008 lb-PM10/MMBtu, 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu, or 0.0039 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.008 lb-PM10/MMBtu, 25 ppmvd CO @ 3% O2 or 0.0185 lb-CO/MMBtu, or 0.0039 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. NOx emissions shall not exceed either of the following: 19.8 lb/day and 6,403 lb/y. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Total sulfur oxide (SOx as SO2) emissions shall not exceed 1,075.2 lb/day from steam generators S-1372-1, '2, '4, '127, '317, and flare '100. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All vapor recovery gas burned in this device shall first be treated by the scrubber/wet ESP so at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
16. Compliance with the 95% by weight sulfur removal efficiency shall be conducted at least once every twelve months. [District Rule 4320] Federally Enforceable Through Title V Permit
17. The SOx emission control system efficiency shall be determined using the following equation: Percent Control Efficiency = $[(\text{CSO}_2, \text{inlet} - \text{CSO}_2, \text{outlet}) / \text{CSO}_2, \text{inlet}] \times 100$, where "CSO2, inlet" is equal to the concentration of SOx (expressed as SO2) at the inlet side of the SOx emission control system (in lb/dscf) and "CSO2, outlet" is equal to the concentration of SOx (expressed as SO2) at the outlet side of the SOx emission control system (in lb/dscf). [District Rule 4320] Federally Enforceable Through Title V Permit
18. The total gas fired in this unit, on a monthly average, shall be less than 50% PUC quality natural gas, by volume. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet and no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet. PUC quality natural gas also means high methane gas of at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain monthly records of the volume of PUC quality natural gas and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit
20. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Methods 6, 6B, 8, or ARB 100. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SOx emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Sulfur compound (SO2) emission limit compliance shall be demonstrated by fuel gas sulfur analysis performed 60 days prior to permit anniversary date. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Compliance with casing gas sulfur compound emission limits shall be demonstrated by record keeping of TEOR gas flowrate and H2S concentration. [District Rule 1070] Federally Enforceable Through Title V Permit
23. The wet ESP's secondary DC voltage shall be monitored weekly to ensure it is operating between 35 to 50KV [District Rule 2201] Federally Enforceable Through Title V Permit
24. Permittee shall maintain daily records of volume of natural gas burned and TEOR waste gas incinerated. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Permittee shall measure and record, at least monthly, the sulfur content and BTU content of the TEOR waste gas incinerated in this unit. [District Rule 4406, 4.0] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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26. Permittee shall measure and record the natural gas sulfur content and BTU content at the time of NO_x testing, except for natural gas purchased from a PUC regulated utility. [District Rule 4406, 4.0] Federally Enforceable Through Title V Permit
27. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
28. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
35. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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37. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
38. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
40. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
41. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
42. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
43. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
44. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
45. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
46. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
47. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
48. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
49. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

50. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
51. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
52. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
53. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
54. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
55. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
56. Permittee shall maintain daily records of SO_x (as SO₂) emissions (lb/day) from steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
57. Permittee shall maintain records of the wet ESP's secondary DC voltage and shall be made readily available for District inspection upon request [District Rule 2201] Federally Enforceable Through Title V Permit
58. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
59. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
60. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

61. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
62. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-318-11

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

67.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR (HOPKINS LEASE)

PERMIT UNIT REQUIREMENTS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
3. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
4. While dormant, normal source testing shall not be required. [District Rule 2080]
5. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
7. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
8. Steam generator shall only receive TEOR gas from TEOR permit S-1372-316, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
9. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320, 5.7.6.2] Federally Enforceable Through Title V Permit
10. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rule 4320] Federally Enforceable Through Title V Permit
11. Unit shall be fired only on PUC quality natural gas or TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Burner shall be equipped with operational TEOR gas volume flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit
14. Emission rates shall not exceed any of the following: PM10: 0.014 lb/MMBtu, NOx (as NO2): 0.008 lb/MMBtu or 7 ppmvd @ 3% O2, VOC: 0.039 lb/MMBtu, or CO: 138 ppmvd @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1; and 4320] Federally Enforceable Through Title V Permit
15. SOx emissions shall not exceed 5.86 lb/hr. SOx emissions limit shall be verified through records of quantity of TEOR fuel gas combusted and fuel gas sulfur concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Steam generators S-1372-10, -14, -23, -30, -31, -32, -33, -34, and -318 shall be fired exclusively on PUC quality natural gas when steam generators S-1372-8, 17, 18, 19, 20 are incinerating TEOR vapors. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
35. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
36. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
45. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
49. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
50. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-319-21

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

67.5 MMBTU/HR NATURAL GAS/TEOR/TVR GAS-FIRED STEAM GENERATOR (#49) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR. OPERATING AT TWO LOCATIONS: MCKITTRICK FRONT (NW6, T30S R21E) AND HOPKINS LEASE (NW10, T29S R21E)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. This unit may operate at the following locations: NW Section 6, T30S, R21E (McKittrick Front) and NW Section 10, T29S, R21E (Hopkins Lease). [District Rule 2201] Federally Enforceable Through Title V Permit
8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Unit shall be fired only on PUC quality natural gas or TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Burner shall be equipped with operational TEOR gas volume flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Steam generator shall only receive TEOR gas from TEOR permit S-1372-316, and the sulfur content of the TEOR gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal (using the sulfur scrubber listed on TEOR permit) prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
12. When complying with SOx emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. Emission rates shall not exceed any of the following: PM₁₀: 0.014 lb/MMBtu, NO_x (as NO₂): 0.008 lb/MM Btu or 7 ppmvd @ 3% O₂, VOC: 0.039 lb/MMBtu, or CO: 138 ppmvd @ 3% O₂. [District Rule 2201 and District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. SO_x emissions shall not exceed 5.86 lb/hr. SO_x emissions limit shall be verified through records of quantity of TEOR fuel gas combusted and fuel gas sulfur concentration. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
44. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-320-3

EXPIRATION DATE: 05/31/2021

SECTION: NE08 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,500 BBL FIXED ROOF STOCK TANK (TK #1) (MORRIS LEASE)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

INSPECTION
WORKSHEET
EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC

MAILING ADDRESS: 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE08 **TOWNSHIP:** 30S **RANGE:** 22E

PHYSICAL LOCATION: Morris Lease

INSPECT PROGRAM PARTICIPANT: NO

EQUIPMENT DESCRIPTION:

1,350 BBL WASH TANK (MORRIS LEASE)

CONDITIONS

1. True vapor pressure of any organic liquid introduced to the tank shall not exceed 0.5 psia at liquid temperature. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
3. The operator shall conduct a TVP testing of each uncontrolled fixed roof tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. The operator shall also comply with Section 6.2.1.2. The operator shall submit the records of TVP and/or API gravity testing to the APCO as specified in Section 6.3.6. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
4. The operator shall submit the records of TVP and API gravity testing conducted in accordance with the requirements of Section 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
5. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit
6. The operator shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity. Such records shall be retained for at least five years and made available to the District upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-323-4

EXPIRATION DATE: 05/31/2021

SECTION: NW 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1372-324 AND '443 ROUTED TO CASING VAPOR COLLECTION SYSTEM LISTED ON PERMIT S-1372-100 (MCKITTRICK FRONT LEASE)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
3. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-324-4

EXPIRATION DATE: 05/31/2021

SECTION: NW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH P/V VALVE CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-323 (MCKITTRICK FRONT LEASE)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
3. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-329-9

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. The permittee shall use flue gas recirculation (FGR) when the steam generator is in operation. [District Rule 4305] Federally Enforceable Through Title V Permit
2. Only PUC-quality natural gas shall be burned. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
5. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Except during startup and shutdown when fired on natural gas, emissions rates from the unit shall not exceed any of the following limits: 7 ppmv NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 113.7 ppmv CO @ 3% O2 or 0.084 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4301, 4305, 4320, 4306, 4406, and 4801] Federally Enforceable Through Title V Permit
7. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
8. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
23. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
27. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
35. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
38. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-334-23

EXPIRATION DATE: 05/31/2021

SECTION: NW7 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

27.5 MMBTU/HR NATURAL GAS/WASTE GAS-FIRED STEAM GENERATOR (#56) (HSG #577) WITH FGR AND NORTH AMERICAN MAGNA-FLAME 4211 27-LE LOW-NOX BURNER OPERATED AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. This steam generator is approved to operate at the following locations: NW/4 Section 7 and SW/4 Section 6 of T30S R22E; NE/4 Section 20 of T29S R21E; and NE/4 Section 12 of T28S R20E. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Vapor recovery gas and natural gas lines to steam generator shall be equipped with operational volumetric flowrate indicators. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Total fuel usage shall not exceed 154 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. Duration of start-up or shutdown shall not exceed 2 hours each per occurrence. During start-up or shutdown, the emission control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
13. Except during startup and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmv NO_x @ 3% O₂ (0.00863 lb/MMBtu), 9 ppmv SO_x @ 3% O₂ (0.0154 lb/MMBtu), 0.024 lb-PM₁₀/MMBtu, 30 ppmv CO @ 3% O₂ (.0225 lb/MMBtu), or 7 ppmv VOC @ 3% O₂ (0.003 lb/MMBtu). [District Rules 2201, 4305, 5.1, 4306, 5.1, and 4320, 5.4] Federally Enforceable Through Title V Permit
14. Sulfur compound emissions shall not exceed 0.0077 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
31. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
43. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

45. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
46. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
48. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-355-12

EXPIRATION DATE: 05/31/2021

SECTION: SW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#52) (DIS #22457-79) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR (STAR FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Only natural gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Emissions from this unit shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @3% O2; or CO: 138 ppmv @3% O2. [District Rules 2201, 4305, 5.1, 4306, 5.1, and 4320] Federally Enforceable Through Title V Permit
4. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
5. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
20. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
24. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
25. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
26. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
27. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
30. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
33. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
34. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
35. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
37. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-356-12

EXPIRATION DATE: 05/31/2021

SECTION: SW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22468-79) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Only PUC-quality natural gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Emissions from this unit shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @3% O2; or CO: 138 ppmv @3% O2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
4. The steam generator shall be equipped with an FGR valve positioning indicator. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. Except during periods of steam generator startup/shutdown, steam generator shall not be operated unless flue gas recirculation system is operating. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Steam generator may be equipped with a programmable logic controller (PLC). [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
8. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
23. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
26. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
27. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
33. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
35. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
37. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
38. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
40. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-357-12

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22469-79) WITH A NORTH AMERICAN GLE
ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
3. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
4. While dormant, normal source testing shall not be required. [District Rule 2080]
5. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
7. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
8. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Only PUC-quality natural gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
12. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
13. Except during startup and shutdown emissions from this unit shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 7 ppmv @3% O2 or 0.008 lb/MMBtu; or CO: 138 ppmv @3% O2. [District Rules 2201, 4301, 4305, 4306, 4406, 4320, and 4801] Federally Enforceable Through Title V Permit
14. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
30. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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38. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
42. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
45. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
47. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-358-13

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22470-79) WITH FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
3. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
4. While dormant, normal source testing shall not be required. [District Rule 2080]
5. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
7. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
8. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit
9. When continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Only PUC-quality natural gas shall be used as fuel. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
12. Duration of start-up or shutdown shall not exceed 2 hours each per occurrence. During start-up or shutdown, the emission control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6, and 4306, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. Except during startup or shutdown periods, emissions from the steam generator shall not exceed any of the following limits: 7 ppmv NO_x @ 3% O₂ (0.00863 lb/MMBtu), 0.003 lb-SO_x/MMBtu, 0.008 lb-PM₁₀/MMBtu, 30 ppmv CO @ 3% O₂ (.0225 lb/MMBtu), or 7 ppmv VOC @ 3% O₂ (0.003 lb/MMBtu). [District Rules 2201, 4301, 5.2, 4305, 5.1, 4306, 5.1, and 4320, 5.1] Federally Enforceable Through Title V Permit
14. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
20. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
30. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
33. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
34. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

37. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
39. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
42. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
43. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
45. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-359-10

EXPIRATION DATE: 05/31/2021

SECTION: SW06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22632-80) WITH A NORTH AMERICAN GLE
ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. Only PUC-quality natural gas shall be used as fuel. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
5. Except during startup and shutdown emissions from this unit shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.008 lb/MMBtu or 7 ppmv @3% O2; or CO: 0.102 lb/MMBtu or 138 ppmv @3% O2. [District Rules 2201, 4301, 4305, 4306, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
6. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
7. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
22. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
26. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
27. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
28. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
34. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
35. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
36. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
37. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
39. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-370-7

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

TANK VAPOR CONTROL SYSTEM SERVING TANKS S-1372-263, -264, -265, -267 AND -268, WITH COMPRESSED VAPORS ROUTED TO STEAM GENERATOR PERMIT S-1372-8 AND TEOR SYSTEM PERMIT S-1372-74 FOR DISPOSAL

PERMIT UNIT REQUIREMENTS

1. Vapor control system shall route collected vapors into TEOR vapor control system S-1372-74 for disposal. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. Vapor control equipment compressor shall activate before the pressure relief valve on any of the units served by the vapor control equipment vents. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The vapor control equipment shall be capable of reducing VOC emissions by at least 95% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC emissions from fugitive components of vapor control system shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities < 10,000 ppmv screening value ranges emissions factors. [District Rule 2201] Federally Enforceable Through Title V Permit
6. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
7. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
8. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
9. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
10. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
12. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
13. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
14. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
15. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv from vapor control system components (downstream of control valve between vessel and vapor control system piping) shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-371-8

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH A NORTH AMERICAN MAGNA FLAME G-LE ULTRA LOW NOX BURNER, OXYGEN (O2) CONTROLLER AND FLUE GAS RECIRCULATION, OPERATED AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Approved locations for this equipment: NW Section 10, Township 29S, Range 21E (South Belridge Oilfield, Hopkins), NE Section 12, Township 28S, Range 20E (South Belridge Oilfield, Dow Chanslor Fee near Lost Hills Road), and NE Section 19, Township 30S, Range 21E (McKittrick Oilfield, McKittrick 19Z Fee near Reward Road). [District Rule 4102] Federally Enforceable Through Title V Permit
8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
9. Steam generator shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.35 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
10. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
12. Duration of start-up or shutdown shall not exceed 2 hours each per occurrence. During start-up or shutdown, the emission control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6, and 4306, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. Except during startup or shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmv NO_x @ 3% O₂ (0.00863 lb/MMBtu), 0.001 lb-SO_x/MMBtu, 0.0051 lb-PM₁₀/MMBtu, 30 ppmv CO @ 3% O₂ (.0225 lb/MMBtu), or 7 ppmv VOC @ 3% O₂ (0.003 lb/MMBtu). [District Rules 2201, 4305, 5.1, 4306, 5.1, and 4320, 5.1] Federally Enforceable Through Title V Permit
14. Compliance with SO_x emissions limit shall be determined by fuel gas analysis using ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Compliance with fuel gas sulfur content shall be demonstrated annually. [District Rule 2201 and 4801] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
36. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
44. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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48. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-372-10

EXPIRATION DATE: 05/31/2021

SECTION: NW 3 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVR GAS-FIRED (TVR SYSTEM GAS ALLOWED AT REARDON LEASE ONLY) STEAM GENERATOR (#64) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, OXYGEN (O2) CONTROLLER AND FGR

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Approved locations for this equipment: NW/SW Section 3, Township 31S, Range 22E (Reardon Lease), SW Section 10, Township 31S, Range 22E (Midway Sunset Oilfield, E&M Lease near Derby Acres) and NE Section 19, Township 30S, Range 21E (McKittrick Oilfield, McKittrick 19Z Fee near Reward Road). [District Rule 4102]
8. When operated at permitted locations other than NW/SW Section 3, T31S, R22E (Reardon Lease), the steam generator shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.4 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
9. When operated at NW/SW Section 3, T31S, R22E (Reardon Lease), the steam generator shall be fired on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.4 grains of sulfur compounds (as S) per 100 dry scf of natural gas, or the natural gas may be blended with TVC gas resulting from any combination of tanks S-1372-388 through -392, that has been scrubbed to 95% control prior to the steam generator inlet, and with an H2S concentration of no greater than 1,750 ppmv at the steam generator inlet. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
10. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. Steam generator shall only receive combined TEOR/TVR gas from TEOR permit S-1372-387 (which may receive TVR gas from permit S-1372-388) and the sulfur content of the combined gas shall not exceed 5 grains sulfur/100 scf or shall be scrubbed for 95% sulfur removal using the sulfur scrubber listed on TEOR permit S-1372-387 prior to being piped to this steam generator for incineration. [District Rule 4320] Federally Enforceable Through Title V Permit
12. When complying with SO_x emissions requirements by scrubbing TEOR gas for 95% sulfur control, inlet and outlet sulfur concentrations of the sulfur scrubber shall be tested weekly. If compliance with the 95% control efficiency has been demonstrated for 8 consecutive weeks, then the control efficiency testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320.5.7.6.2 and 2520] Federally Enforceable Through Title V Permit
13. When complying with SO_x emissions limits (5 grains sulfur/100 scf) by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emissions limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly test fails to show compliance, weekly testing shall resume. [District Rules 4320 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
14. When PUC quality natural gas fired, emission rates shall not exceed any of the following: NO_x (as NO₂): 7 ppmv NO_x @ 3% O₂ or 0.008 lb/MMBtu, SO_x (as SO₂): 0.001 lb/MMBtu, PM₁₀: 0.005 lb/MMBtu, CO: 0.102 lb/MMBtu, VOC: 0.0055 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. When fired on a blend of PUC quality natural gas and scrubbed TVC (tank vapor control) gas, emission rates shall not exceed any of the following: 7 ppmv NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0730 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 0.102 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
16. TVC system gas sulfur content shall be scrubbed to 95% control prior to the fuel inlet in the sulfur removing media system associated with S-1372-387, and shall be combusted only at W1/2 Section 3, Township 31S, Range 22E (Reardon Lease) [District Rule 2201] Federally Enforceable Through Title V Permit
17. Sulfur content of blended PUC quality and scrubbed TVC system gas combusted by the steam generator shall not exceed 1,750 ppm H₂S. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The TVC system gas fuel rate to the steam generator shall not exceed 168.8 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility, or any malfunction of the air pollution control equipment. [District Rule 4001 and 40CFR60 Subpart Db] Federally Enforceable Through Title V Permit
20. Except during periods of steam generator startup or shutdown, the steam generator shall not be operated unless the flue gas recirculation system is operating. [District Rule 4305] Federally Enforceable Through Title V Permit
21. When the steam generator is fired on TVC system gas or TVC system gas blended with PUC quality natural gas, the TVC system gas shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of volume of PUC quality gas burned and TVC system gas incinerated, PUC quality gas and TVC system gas sulfur content, and PUC quality gas and TVC system gas higher heating value. [District Rule 1070] Federally Enforceable Through Title V Permit
23. The SLC includes steam generators S-1372-372 and -373 when operated at any permitted location, and the flare associated with permit S-1372-388. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Emissions from one steam generator shall not exceed any of the following: 4,380 lb/yr NO_x, 39,968 lb/yr SO_x, 2,738 lb/yr PM₁₀, 55,845 lb/yr CO, 3,011 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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25. Emissions from the flare alone shall not exceed any of the following: 1,408 lb/yr NO_x, 13,294 lb/yr SO_x, 166 lb/yr PM₁₀, 7,659 lb/yr CO, 1,304 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Emissions from the flare and one steam generator shall not exceed any of the following: 13,562 lb/yr NO_x, 53,262 lb/yr SO_x, 3,238 lb/yr PM₁₀, 78,992 lb/yr CO, 6,952 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Emissions from two steam generators shall not exceed any of the following : 8,760 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Total emissions from all permit units in the SLC shall not exceed any of the following : 18,616 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Total TVC system gas use for units in the SLC plan shall not exceed 337.6 MMBtu/day. [District Rule 2201]
30. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
32. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District Rule 2201] Federally Enforceable Through Title V Permit
33. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Emissions assessed to the SLC plan for the flare shall not exceed any of the following: 23.0 lb/day NO_x, 216.8 lb/day SO_x, 2.7 lb/day PM₁₀, 124.9 lb/day CO, 21.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Emissions assessed to the SLC plan for each steam generator shall not exceed any of the following: 25.5 lb/day NO_x, 109.5 lb/day SO_x, 7.5 lb/day PM₁₀, 153.0 lb/day CO, 8.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Total combined emissions from all permit units in the SLC plan shall not exceed any of the following: 51.0 lb/day NO_x, 219.0 lb/day SO_x, 15.0 lb/day PM₁₀, 306.0 lb/day CO, 16.6 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
38. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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39. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
40. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
41. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
42. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
44. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
45. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
46. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
47. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
48. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
49. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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50. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
51. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
52. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
53. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
54. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
55. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
56. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
57. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
58. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
59. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
60. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
61. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

62. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
63. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
64. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
65. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
66. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
67. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
68. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
69. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-373-10

EXPIRATION DATE: 05/31/2021

SECTION: NW3 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#65) (DIS# 28623-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FGR

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Approved locations for this equipment: NW/SW Section 3, Township 31S, Range 22E (Reardon Lease), SW Section 10, Township 31S, Range 22E (Midway Sunset Oilfield, E&M Lease near Derby Acres) and NE Section 19, Township 30S, Range 21E (McKittrick Oilfield, McKittrick 19Z Fee near Reward Road). [District Rule 4102]
8. When operated at permitted locations other than NW/SW Section 3, T31S, R22E (Reardon Lease), the steam generator shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.4 grains of sulfur compounds (as S) per 100 dry scf of natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
9. When operated at NW/SW Section 3, T31S, R22E (Reardon Lease), the steam generator shall be fired on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.4 grains of sulfur compounds (as S) per 100 dry scf of natural gas, or the natural gas may be blended with TVC gas resulting from any combination of tanks S-1372-388 through -392, that has been scrubbed to 95% control prior to the steam generator inlet, and with an H2S concentration of no greater than 1750 ppmv at the steam generator inlet. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Emissions shall not exceed any of the following: 27 lb NO_x/day, 4,380 lb NO_x/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
14. Except during startup and shutdown when PUC quality natural gas fired, emission rates shall not exceed any of the following: 7 ppmv NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0730 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 138 ppmv CO @ 3% O₂ or 0.102 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All vapor recovery gas burned in this device shall first be treated by the sulfur removal system listed on S-1372-387 so that at least 95% by weight of the sulfur is removed. [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
16. Sulfur content of blended PUC quality and scrubbed TVC system gas combusted by the steam generator shall not exceed 1,750 ppm H₂S. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The TVC system gas fuel rate to the steam generator shall not exceed 168.8 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Compliance with 95% by weight sulfur removal efficiency requirement shall be conducted annually. [District Rule 4320] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility, or any malfunction of the air pollution control equipment. [District Rule 4001 and 40CFR60 Subpart Db] Federally Enforceable Through Title V Permit
20. Except during periods of steam generator startup or shutdown, the steam generator shall not be operated unless the flue gas recirculation system is operating. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. If the unit is fired on non-PUC quality fuel, and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
22. The SLC includes steam generators S-1372-372 and -373 when operated at any permitted location, and the flare associated with permit S-1372-388. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Emissions from one steam generator shall not exceed any of the following: 9,308 lb/yr NO_x, 39,968 lb/yr SO_x, 2,738 lb/yr PM₁₀, 55,845 lb/yr CO, 3,011 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Emissions from the flare alone shall not exceed any of the following: 1,408 lb/yr NO_x, 13,294 lb/yr SO_x, 166 lb/yr PM₁₀, 7,659 lb/yr CO, 1,304 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Emissions from the flare and one steam generator shall not exceed any of the following: 13,562 lb/yr NO_x, 53,262 lb/yr SO_x, 3,238 lb/yr PM₁₀, 78,992 lb/yr CO, 6,952 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Emissions from two steam generators shall not exceed any of the following : 18,616 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Total emissions from all permit units in the SLC shall not exceed any of the following : 18,616 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

28. Total TVC system gas use for units in the SLC plan shall not exceed 337.6 MMBtu/day. [District Rule 2201]
29. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District Rule 2201] Federally Enforceable Through Title V Permit
32. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District Rule 2201] Federally Enforceable Through Title V Permit
33. Emissions assessed to the SLC plan for the flare shall not exceed any of the following: 23.0 lb/day NO_x, 216.8 lb/day SO_x, 2.7 lb/day PM₁₀, 124.9 lb/day CO, 21.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Emissions assessed to the SLC plan for each steam generator shall not exceed any of the following: 25.5 lb/day NO_x, 109.5 lb/day SO_x, 7.5 lb/day PM₁₀, 153.0 lb/day CO, 8.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Total combined emissions from all permit units in the SLC plan shall not exceed any of the following: 51.0 lb/day NO_x, 219.0 lb/day SO_x, 15.0 lb/day PM₁₀, 306.0 lb/day CO, 16.6 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
37. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
38. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

40. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
41. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
43. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
44. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
45. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
46. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
47. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
48. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
49. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
50. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
51. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
52. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
53. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
54. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

55. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
56. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
57. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
58. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
59. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
60. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
61. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
62. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
63. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

64. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
65. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
66. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
67. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
68. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-374-8

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#57) (DIS# 21939-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. If the steam generator is fired exclusively on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
9. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 1070] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each non-certified fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. If the unit is not fired exclusively on PUC-regulated natural gas, compliance with SOx emission limits shall be demonstrated through fuel sulfur content analysis using ASTM D1072, D3246, D4084, D4468, D6667, or double GC for H₂S and Mercaptans. [District Rule 1070] Federally Enforceable Through Title V Permit
12. NOx emissions shall not exceed 7.0 ppmvd @ 3% O₂ or 0.008 lb/MMBtu referenced as NO₂. [District Rules 2201, 4306, and 4320] Federally Enforceable Through Title V Permit
13. CO emissions shall not exceed 26 ppmvd @ 3% O₂. [District Rule 2201] Federally Enforceable Through Title V Permit
14. SOx emissions shall not exceed 0.003 lb/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
15. PM₁₀ emissions shall not exceed 0.008 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. VOC emissions shall not exceed 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Permittee shall maintain a record of the date of initial operation. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
18. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
19. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22, and 4320] Federally Enforceable Through Title V Permit
20. Emissions shall not exceed any of the following: NOx: 27.0 lb/day and 4,380 lb/year, CO: 28.5 lb/day and 10,403 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. If either the NOx or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
34. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
36. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
37. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
39. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
40. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
41. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
42. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
43. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
44. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
45. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
47. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

48. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
49. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
50. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
51. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
52. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
53. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-375-6

EXPIRATION DATE: 05/31/2021

SECTION: 29 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#58) (DIS# 28623-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
2. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 1070] Federally Enforceable Through Title V Permit
3. If the unit is not fired exclusively on PUC-regulated natural gas, compliance with SO_x emission limits shall be demonstrated through fuel sulfur content analysis using ASTM D1072, D3246, D4084, D4468, D6667, or double GC for H₂S and Mercaptans. [District Rule 1070] Federally Enforceable Through Title V Permit
4. Emissions shall not exceed any of the following: 27 lb NO_x/day, 4,380 lb NO_x/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
7. Except during startup and shutdown emissions shall not exceed any of the following: NO_x: 7 ppmv @ 3% O₂ or 0.008 lb/MMBtu, CO: 26 ppmv @ 3 % O₂ or 0.019 lb/MMBtu, SO_x: 0.00285 lb/MMBtu, PM₁₀: 0.008 lb/MMBtu, and VOC 0.003 lb/MMBtu. [District Rules 2201, 4301, 4305, 4306, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
9. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
37. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-376-10

EXPIRATION DATE: 05/31/2021

SECTION: 29 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#59) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
8. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 1070] Federally Enforceable Through Title V Permit
10. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
13. Except during startup and shutdown emissions shall not exceed any of the following: NOx: 7 ppmv @ 3% O₂ or 0.008 lb/MMBtu, CO: 26 ppmv @ 3 % O₂ or 0.019 lb/MMBtu, SOx: 0.00285 lb/MMBtu, PM₁₀: 0.008 lb/MMBtu, and VOC 0.003 lb/MMBtu. [District Rules 2201, 4301, 4305, 4306, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
15. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NOx, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If either the NOx or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NOx and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
31. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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36. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
43. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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46. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

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San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-377-8

EXPIRATION DATE: 05/31/2021

SECTION: 29 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#60) (DIS# 28618-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. This permit unit is authorized to operate at the following locations: sec 29, T28S, R21E; SW/4 sec 16, T31S, R22E and sec 6, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
3. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. Emissions shall not exceed any of the following: 27 lb NOx/day, 4,380 lb NOx/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Permittee shall maintain records of duration of each start-up and shutdown, for a period of five years and make such records readily available for District inspection upon request. [District Rule 1070 and 4320] Federally Enforceable Through Title V Permit
7. Except during startup and shutdown emissions shall not exceed any of the following: NOx: 7 ppmv @ 3% O2 or 0.008 lb/MMBtu, CO: 26 ppmv @ 3 % O2 or 0.019 lb/MMBtu, SOx: 0.00285 lb/MMBtu, PM10: 0.008 lb/MMBtu, and VOC 0.003 lb/MMBtu. [District Rules 2201, 4301, 4305, 4306, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit
8. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit
9. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NOx and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NOx and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The number of representative units source tested to demonstrate compliance for NOx and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
37. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. Formerly S-1547-698.
42. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-378-6

EXPIRATION DATE: 05/31/2021

SECTION: 34 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#34) (DIS #19965-74) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. Unit is approved for operation at the following locations: NE/4 Section 19, T30S, R21E (19Z Fee), NW/4 Section 10, T29S, R21E (Hopkins Fee), and Section 16, T31S, R22E (Bremer Fee). [District Rule 4102]
2. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the steam generator is fired exclusively on PUC-regulated natural gas, then the permittee shall maintain on file copies of all natural gas bills or fuel throughput records for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 1070] Federally Enforceable Through Title V Permit
6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each non-certified fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070] Federally Enforceable Through Title V Permit
7. NO_x (as NO₂) emissions shall not exceed 7.0 ppmvd @ 3% O₂ or 0.008 lb/MMBtu. [District Rules 2201, 4306, and 4320] Federally Enforceable Through Title V Permit
8. CO emissions shall not exceed 26 ppmvd @ 3% O₂. [District Rule 2201] Federally Enforceable Through Title V Permit
9. SO_x emissions shall not exceed 0.003 lb/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
10. PM₁₀ emissions shall not exceed 0.008 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. VOC emissions shall not exceed 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
13. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306, 3.25 and 3.22, and 4320] Federally Enforceable Through Title V Permit
15. Emissions shall not exceed any of the following: NO_x: 27.0 lb/day and 4,380 lb/year, CO: 28.5 lb/day and 10,403 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
35. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
40. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
43. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
44. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

46. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
48. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-379-6

EXPIRATION DATE: 05/31/2021

SECTION: 28 **TOWNSHIP:** 28S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#37) (DIS #20623-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. Unit is approved for operation at the following locations: NE/4 Section 19, T30S, R21E (19Z Fee), NW/4 Section 10, T29S, R21E (Hopkins Fee), and Section 16, T31S, R22E (Bremer Fee). [District Rule 4102]
2. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including treated produced gas and purchased gas. The total sulfur content of the fuel gas shall not exceed 1.1 gr/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the steam generator is not fired exclusively on PUC-regulated natural gas, the sulfur content of each fuel source shall be tested weekly except that if compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be quarterly. If a test shows noncompliance with the sulfur content requirement, the source must return to weekly testing until eight consecutive weeks show compliance. [District Rule 1070] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each non-certified fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 1070] Federally Enforceable Through Title V Permit
6. NO_x (as NO₂) emissions shall not exceed 7.0 ppmvd @ 3% O₂ or 0.008 lb/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. CO emissions shall not exceed 26 ppmvd @ 3% O₂. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. SO_x emissions shall not exceed 0.003 lb/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. PM₁₀ emissions shall not exceed 0.008 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC emissions shall not exceed 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions shall not exceed any of the following: NO_x: 54.0 lb/day and 4,380 lb/year, CO: 28.5 lb/day and 10,403 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
13. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 5.5.6, 4306, 5.3, and 4320] Federally Enforceable Through Title V Permit
14. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
15. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
31. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
35. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

36. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
37. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
38. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
39. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
40. When complying with SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
42. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
43. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
44. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
45. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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46. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
47. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-387-5

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

TEOR OPERATION WITH 116 CYCLIC CLOSED CASING VENT WELLS, SEPARATORS, HEAT EXCHANGERS, SULFA TREAT SYSTEM, COMPRESSORS, PUMPS, VAPOR RECOVERY SKIDS, SCRUBBER(S) AND KNOCK OUT DRUM

PERMIT UNIT REQUIREMENTS

1. Total uncontrolled VOC emissions from all wells shall be reduced by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit
2. VOC content of the gas stream processed shall not exceed 10% of the total hydrocarbon content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
3. To qualify for quantification of no fugitive emissions, operator shall conduct quarterly gas sampling after the TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sample frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not within 48 hours of routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fluids produced from these cyclic wells with closed casing vents shall be introduced only to tanks S-1372-388, '-389, '-390, '-391 and '-392 that are vented to an approved vapor collection and control system achieving 99% control piped or to TEOR operation S-1114-66.; or to permit exempt storage equipment as defined by Rule 2020, Section 6.6. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
6. Permittee shall maintain a current listing of all wells assigned to this permit. The listing shall be updated monthly and made readily available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain a current list of all thermally enhanced production wells associated with this operation and accurate records of fugitive inspection component counts of non-exempt components and leak inspection results, and make such records readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Permittee shall maintain a written record of VOC content of the gas and location of sampling point. [District Rule 1070] Federally Enforceable Through Title V Permit
9. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
10. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
12. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit
13. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
14. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
15. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
16. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
17. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
18. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
19. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
20. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
22. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.7] Federally Enforceable Through Title V Permit
23. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit
24. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
25. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
26. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
27. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
28. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
29. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
30. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
31. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
32. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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33. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
34. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
35. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
36. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
37. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
38. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
39. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
40. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
41. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
42. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
43. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
44. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

45. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
46. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
47. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
48. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
49. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
50. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
51. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
52. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-388-6

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3,000 BBL STOCK TANK VENTED TO VAPOR CONTROL SYSTEM WITH A 1.0 MMSCF/DAY JOHN ZINK AZDAIR PLASMA AIR-ASSISTED PRODUCED GAS FLARE SHARED BETWEEN PERMIT UNITS S-1372-388, '389, '390, '391 AND '392 INCLUDING INLET COOLER, SUCTION SCRUBBER, DISCHARGE SCRUBBER, PUMPS, AND COMPRESSORS

PERMIT UNIT REQUIREMENTS

1. Sulfur treatment systems shall be used as needed to meet the emission limits of the flare. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Emission rates shall not exceed any of the following: 0.068 lb-NO_x/MMBtu, 0.6422 lb-SO_x/MMBtu, 0.008 lb-PM₁₀/MMBtu, 0.370 lb-CO/MMBtu, or 0.063 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
3. TVC (tank vapor control) system gas sulfur content shall be scrubbed to 95% control at the outlet of the sulfur removing media system associated with S-1372-387, and shall be combusted only at W1/2 Section 3, Township 31S, Range 22E (Reardon Lease). [District Rule 2201] Federally Enforceable Through Title V Permit
4. Sulfur content of scrubbed TVC system gas combusted by the flare shall not exceed 1,750 ppm H₂S. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The TVC system gas flow rate to the flare shall not exceed 337.6 MMBtu/day or 20,700 MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Flare pilot shall be fired on PUC quality natural gas, and shall not exceed 3.6 Mscf/day [District Rule 2201] Federally Enforceable Through Title V Permit
7. Flares shall be designed for and operated with no visible emissions except for periods not to exceed a total of three (3) minutes in any one (1) hour. [District Rule 4101, 5.1 and 40 CFR 60.18(c)(1)] Federally Enforceable Through Title V Permit
8. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3 and 40CFR 60.18(f)(2)] Federally Enforceable Through Title V Permit
9. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
10. Open flares in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
11. Flare shall comply with all of the applicable requirements of Rule 4311. [District Rule 4311] Federally Enforceable Through Title V Permit
12. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2 and 40CFR 60.18(c)(2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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13. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4 and 40CFR 60.18(f)(2)] Federally Enforceable Through Title V Permit
14. Flares using flow-sensing automatic ignition systems and not using a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
15. Open flares (air-assisted, steam-assisted, or non-assisted) in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
16. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Rule 4311, Section 6.5, and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere [District Rule 4311, 5.8]
17. The operator of a flare subject to flare minimization requirements pursuant to Section 5.8 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311, 5.10]
18. The following records shall be maintained, retained on-site for a minimum of five years, and made available to the APCO, ARB, and EPA upon request: 1) A copy of the compliance determination conducted pursuant to Section 6.4.1., 2) For flares used during an emergency, record of the duration of flare operation, amount of gas burned, and the nature of the emergency situation, 3) A copy of the approved flare minimization plan pursuant to Section 6.5, 4) On and after July 1, 2012, where applicable, a copy of annual reports submitted to the APCO pursuant to Section 6.2, and 5) Where applicable, monitoring data collected pursuant to Sections 5.10. [District Rule 4311, 6.1]
19. The operator of a flare subject to flare minimization plans pursuant to Section 5.8 of Rule 4311 shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311, 6.2.1]
20. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare minimization plans pursuant to Section 5.8 shall submit an annual report to the APCO that summarizes all Reportable Flaring Events as defined in Section 3.0 that occurred during the previous 12 month period. The report shall be submitted within 30 days following the end of the twelve month period of the previous year. The report shall include, but is not limited to all of the following: 1) The results of an investigation to determine the primary cause and contributing factors of the flaring event; 2) Any prevention measures considered or implemented to prevent recurrence together with a justification for rejecting any measures that were considered but not implemented; 3) If appropriate, an explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility; and 4) The date, time, and duration of the flaring event. [District Rule 4311, 6.2.2]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Effective on and after July 1, 2012, and annually thereafter, the operator of a flare subject to flare monitoring requirements pursuant to Rule 4311, Sections 5.10, 6.6, 6.7, 6.8, 6.9, and 6.10, as appropriate, shall submit an annual report to the APCO within 30 days following the end of each 12 month period. The report shall include the following: 1) The total volumetric flow of vent gas in standard cubic feet for each day, 2) Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition pursuant to Section 6.6, 3) If vent gas composition is monitored by a continuous analyzer or analyzers pursuant to Section 5.11, average total hydrocarbon content by volume, average methane content by volume, and depending upon the analytical method used pursuant to Section 6.3.4, total reduced sulfur content by volume or hydrogen sulfide content by volume of vent gas flared for each hour of the month, 4) If the flow monitor used pursuant to Section 5.10 measures molecular weight, the average molecular weight for each hour of each month, 5) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, 6) Flare monitoring system downtime periods, including dates and times, 7) For each day and for each month provide calculated sulfur dioxide emissions, and 8) A flow verification report for each flare subject to this rule. The flow verification report shall include flow verification testing pursuant to Section 6.3.5. [District Rule 4311, 6.2.3]
22. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311, 6.3.4] Federally Enforceable Through Title V Permit
23. Upon request, the operator of flares that are subject to Section 5.6 shall make available to the APCO the compliance determination records that demonstrate compliance with the provisions of 40 CFR 60.18, (c)(3) through (c)(5). [District Rule 4311, 6.4.1] Federally Enforceable Through Title V Permit
24. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Permittee shall maintain records of volume of fuel gas burned and TVC system gas incinerated, fuel gas and TVC system gas sulfur content, and fuel gas and TVC system gas higher heating value. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
26. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2520, 9.3.2 and 40 CFR 60.18(d)] Federally Enforceable Through Title V Permit
27. TVC (tank vapor control) system gas shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2201] Federally Enforceable Through Title V Permit
28. If the unit is fired on non-PUC quality fuel, and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2201 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2 and Kern County Rule 407] Federally Enforceable Through Title V Permit
30. The Specific Limiting Condition (SLC) includes steam generators S-1372-372 and -373 when operated at any permitted location, and the flare associated with permit S-1372-388. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Emissions from one steam generator shall not exceed any of the following: 9,308 lb/yr NOx, 39,968 lb/yr SOx, 2,738 lb/yr PM10, 55,845 lb/yr CO, 3,011 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. Emissions from the flare alone shall not exceed any of the following: 1,408 lb/yr NO_x, 13,294 lb/yr SO_x, 166 lb/yr PM₁₀, 7,659 lb/yr CO, 1,304 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
33. Emissions from the flare and one steam generator shall not exceed any of the following: 13,562 lb/yr NO_x, 53,262 lb/yr SO_x, 3,238 lb/yr PM₁₀, 78,992 lb/yr CO, 6,952 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Emissions from two steam generators shall not exceed any of the following : 18,616 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Total emissions from all permit units in the SLC shall not exceed any of the following : 18,616 lb/yr NO_x, 79,936 lb/yr SO_x, 5,476 lb/yr PM₁₀, 111,690 lb/yr CO, 6,022 lb/yr VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Total TVC system gas use for units in the SLC plan shall not exceed 337.6 MMBtu/day. [District Rule 2201]
37. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
38. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit
39. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District Rule 2201] Federally Enforceable Through Title V Permit
40. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District Rule 2201] Federally Enforceable Through Title V Permit
41. Emissions assessed to the SLC plan for the flare shall not exceed any of the following: 23.0 lb/day NO_x, 216.8 lb/day SO_x, 2.7 lb/day PM₁₀, 124.9 lb/day CO, 21.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
42. Emissions assessed to the SLC plan for each steam generator shall not exceed any of the following: 25.5 lb/day NO_x, 109.5 lb/day SO_x, 7.5 lb/day PM₁₀, 153.0 lb/day CO, 8.3 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
43. Total combined emissions from all permit units in the SLC plan shall not exceed any of the following: 51.0 lb/day NO_x, 219.0 lb/day SO_x, 15.0 lb/day PM₁₀, 306.0 lb/day CO, 16.6 lb/day VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
44. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
45. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
46. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
47. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
48. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

49. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
50. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
51. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
52. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
53. Permittee shall maintain records of volume of PUC quality gas burned and TVC system gas incinerated, PUC quality gas and TVC system gas sulfur content, and PUC quality gas and TVC system gas higher heating value. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-389-3

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3,000 BBL REJECT TANK (T-440) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of hydrocarbons in tank vapor system and appurtenant equipment, including tank blanket gas, shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. To qualify for quantification of no fugitive emissions, operator shall conduct quarterly gas sampling after the TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sample frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not within 48 hours of routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
5. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
6. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
7. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
8. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
9. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
12. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
13. The permittee shall keep accurate records of vapor VOC concentration and types of liquids stored. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-390-3

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3,000 BBL CLARIFIER TANK (T-310) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of hydrocarbons in tank vapor system and appurtenant equipment, including tank blanket gas, shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. To qualify for quantification of no fugitive emissions, operator shall conduct quarterly gas sampling after the TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sample frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not within 48 hours of routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
5. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
6. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
7. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
8. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
9. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3]
Federally Enforceable Through Title V Permit
12. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
13. The permittee shall keep accurate records of vapor VOC concentration and types of liquids stored. [District Rule 2201]
Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-391-3

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1,000 BBL SURGE TANK (T-320) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of hydrocarbons in tank vapor system and appurtenant equipment, including tank blanket gas, shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. To qualify for quantification of no fugitive emissions, operator shall conduct quarterly gas sampling after the TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sample frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not within 48 hours of routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
5. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
6. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
7. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
8. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
9. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
12. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
13. The permittee shall keep accurate records of vapor VOC concentration and types of liquids stored. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-392-3

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1,000 BBL DRAIN TANK (T-600) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of hydrocarbons in tank vapor system and appurtenant equipment, including tank blanket gas, shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. To qualify for quantification of no fugitive emissions, operator shall conduct quarterly gas sampling after the TVR compressor (prior to connection to any other vapor control system) and at either the first line tank or at any secondary tank which is heated above ambient temperature. If gas samples are less than 10% VOC by weight for 8 consecutive quarterly samplings, sample frequency shall only be required annually and whenever there is a change in source or type of petroleum processed. Samples shall be collected during periods of normal operation, and not within 48 hours of routine maintenance or repair. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall be fully enclosed and shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
5. Leak-free is a condition without a gas leak or a liquid leak. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
6. A Gas Leak is indicated by a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the test method in Section 6.4.8. [District Rule 4623, 3.11] Federally Enforceable Through Title V Permit
7. A liquid leak is the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.18] Federally Enforceable Through Title V Permit
8. The pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings. The pressure-vacuum relief valve shall be properly installed and maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve set pressure. [District Rule 4623, 5.2] Federally Enforceable Through Title V Permit
9. This tank shall be connected to an APCO-approved vapor recovery system that consists of a closed system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be maintained in a leak-free condition. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
10. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
12. Only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program (program) shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5. When using Tables 3 to 5 and Section 5.7.5 provisions, operators shall perform the procedures as expeditiously as practicable and minimize emissions to the maximum extent practicable. To participate in this program, the operator shall comply with the requirements of Sections 5.7.1 through 5.7.4. [District Rule 4623, 5.7] Federally Enforceable Through Title V Permit
13. The permittee shall keep accurate records of vapor VOC concentration and types of liquids stored. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

***San Joaquin Valley
Air Pollution Control District***

PERMIT UNIT: S-1372-393-3

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF WASTE WATER TANK (#T480) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-370

PERMIT UNIT REQUIREMENTS

1. This tank shall only store clean produced water as defined by Section 3.10 of District Rule 1020. [District Rules 1020 and 2201] Federally Enforceable Through Title V Permit
2. VOC emissions from this tank shall not exceed 0.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-394-4

EXPIRATION DATE: 05/31/2021

SECTION: 16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SG #67) WITH NORTH AMERICAN GLE MODEL G ULTRA LOW NOX BURNER, FGR, AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
3. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306 and 40 CFR 60 Subpart Dc Section 60.48c(g)] Federally Enforceable Through Title V Permit
4. Except during start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOX @ 3% O2 or 0.008 lb-NOX/MMBtu, 0.00285 lb-SOX/MMBtu, 0.0076 lb-PM10/MMBtu, 30 ppmvd CO @ 3% O2 or 0.022 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. During start-up and shutdown, emissions from the steam generator shall not exceed any of the following limits: 9 ppmvd NOX @ 3% O2 or 0.011 lb-NOX/MMBtu, 0.00285 lb-SOX/MMBtu, 0.0076 lb-PM10/MMBtu, 30 ppmvd CO @ 3% O2 or 0.022 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Duration of startup and shutdown shall not exceed 2 hours each per occurrence and, combined, shall not exceed 4 hours per day. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of startup and shutdown periods [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Permittee shall record monthly fuel consumption. [District Rules 4001 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
8. Daily records of start-up and shutdown durations and number of occurrences of each shall be maintained. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Exhaust stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rule 1081] Federally Enforceable Through Title V Permit
10. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
25. Stack gas velocities shall be determined using EPA Method 2. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. In lieu of the annual source testing requirements of Rule 4320, compliance with the applicable emission limits may be demonstrated by submittal of annual emissions test results to the District from a unit or units that represents a group of units, provided that all of the conditions in Section 6.3.2 are met and documented. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Annual test results submitted to the District from unit(s) representing a group of units may be used to demonstrate compliance with NO_x and CO limits of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NO_x or CO emissions limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
29. The following conditions must be met for representative unit(s) to be used to demonstrate compliance for NO_x and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2, 4306, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
30. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
31. All units in a group for which representative units are source tested to demonstrate compliance for NO_x and CO limits of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
32. The number of representative units source tested to demonstrate compliance for NO_x and CO limits shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rules 4305, 6.3.2, 4306, 6.3.2, 4320, and 4351, 6.3.2] Federally Enforceable Through Title V Permit
33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be quarterly. If a quarterly fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
36. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit
37. Copies of all fuel invoices, gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
38. Permittee shall maintain records of volume of fuel gas burned and TEOR gas incinerated, fuel gas and TEOR gas sulfur content, and such records shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
39. Sulfur compound emissions shall not exceed 0.11 lb of sulfur per million BTU. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. [District Rule 4406]
40. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4801 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
41. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-395-3

EXPIRATION DATE: 05/31/2021

SECTION: NE 8 **TOWNSHIP:** 30 S **RANGE:** 22 E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE MODEL G ULTRA LOW NOX BURNER, FGR, AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. Fuel gas sulfur content shall not exceed 1.0 gr S/100 scf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Emissions from the natural gas-fired unit shall not exceed 0.0076 lb-PM10/MMBtu and 0.003 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Except during start-up and shutdown periods emissions from the steam generator shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu or 30 ppmvd CO @ 3% O2 or 0.022 lb-CO/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Maximum emissions from the steam generator, including start-up and shutdown, shall not exceed any of the following limits: 47.6 lb-NOx/day nor 5,896 lb-NOx/yr and 66.0 lb/day CO nor 16,381 lb/yr. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. During start-up and shutdown periods emissions from the steam generator shall not exceed either of the following limits: 0.1 lb-NOx/MMBtu or 0.084 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. During an initial shakedown period not to exceed 60 calendar days from initial operation of the equipment authorized by this ATC, NOx emissions shall not exceed 15 ppmvd @ 3% O₂ or 0.018 lb/MMBtu. The shakedown period shall be concluded upon completion of the initial start-up compliance source test, and shall not exceed 60 days. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 4306, 4320 and 40 CFR 60 Subpart Dc Section 60.48c(g)] Federally Enforceable Through Title V Permit
14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 1070, 2201, and 2520] Federally Enforceable Through Title V Permit
25. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201, and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, and 2520] Federally Enforceable Through Title V Permit
27. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Permittee shall record monthly fuel consumption. [District Rules 4001 and 40 CFR 60.48c(g)] Federally Enforceable Through Title V Permit
32. Copies of all gas purchase contracts, supplier certifications, and test results to determine compliance with the conditions of this permit shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted, fuel sources, and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rules 1070, 2201, and 2520] Federally Enforceable Through Title V Permit
33. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-404-2

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

TEOR SYSTEM INCLUDING 92 CLOSED VENT STEAM ENHANCED WELLS ROUTED TO VAPOR CONTROLLED 2-PHASE SEPARATOR AND TANKS S-1372-405 AND -406

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of the gas in the casing collection system shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct and keep records of quarterly sampling of gas handled by the casing collection system to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If fluids sampled are less than 10% VOC by weight for eight consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
4. The annual inspection requirements of Section 5.8.1 through Section 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10 wt %) or less, as determined by the test methods in Section 6.3.5 of Rule 4401. [District Rule 4401 4.9] Federally Enforceable Through Title V Permit
5. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system. [District Rule 4401, 5.1] Federally Enforceable Through Title V Permit
6. Permittee shall install and maintain an APCO-approved VOC collection and control system that is not open to the atmosphere and that is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to an APCO-approved control device that has a VOC destruction or removal efficiency of at least 99%, or that transports gases or vapors back to a process system. [District Rules 2201 and 4401, 5.1] Federally Enforceable Through Title V Permit
7. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
8. The permittee shall not use any components that leak in excess of the applicable leak standards as specified in this permit. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
10. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
11. In accordance with the approved OMP, permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
12. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
13. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
14. During District compliance inspection, the following conditions shall be used to determination of a violation: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak; 3) Existence of a component with a gas leak greater than 50,000 ppmv; or 4) Existence of a component leak consisting of a minor liquid or gas leak, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv, in excess of the allowable number of leaks specified in Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
15. Permittee shall keep all hatches closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
16. Except for pipes and unsafe-to-monitor components, permittee shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.1 & 5.4.2] Federally Enforceable Through Title V Permit
17. Permittee shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit
18. Permittee shall inspect audio-visually (by hearing and by sight) for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service at least once each calendar week. [District Rule 4401, 5.4.3.1] Federally Enforceable Through Title V Permit
19. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Permittee shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. Permittee shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401, 5.4.4.1] Federally Enforceable Through Title V Permit
21. Permittee shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401, 5.4.4.2] Federally Enforceable Through Title V Permit
22. Except for PRDs, permittee shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4.3] Federally Enforceable Through Title V Permit
23. Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
24. Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401, 5.5.2] Federally Enforceable Through Title V Permit
25. Permittee shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
26. Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
27. The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 3 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
28. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
29. Permittee shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identity and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

30. Permittee shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
31. Annual control efficiency compliance tests shall be performed by source testers certified by the California Air Resource Board (CARB) on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system is not subject to compliance source testing requirements. The APCO may waive these source testing requirements if the vapor control system does not exhaust to atmosphere, or if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine, or in a smokeless flare. [District Rule 4401, 6.2.1 & 6.2.2] Federally Enforceable Through Title V Permit
32. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
33. VOC content shall be determined using ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
34. VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
35. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Permittee shall maintain at the facility the copies of the training records of the training program. [District Rule 4401, 6.1.6 & 6.5] Federally Enforceable Through Title V Permit
36. If applicable, permittee shall maintain source test records which show that the control efficiency requirements of the VOC collection and control system have been satisfied. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
37. Permittee shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
38. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
39. Permittee shall maintain a current roster of all wells connected to this system. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
40. Records of the VOC content of the gas shall be maintained and made readily available for District inspection upon request for a period of 5 years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
41. Permittee shall maintain records of annual testing demonstrating that the water content of fluids processed by components in water/oil service is greater than 50% by weight [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-405-2

EXPIRATION DATE: 05/31/2021

SECTION: 19 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3000 BBL CRUDE OIL TANK T-140 SERVED BY VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER(S), COMPRESSOR(S), KNOCKOUT DRUM(S), PUMP(S), AND SULFUR REMOVAL

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor control system consisting of a closed system that collects VOCs from the storage tank and routes them to DOGGR-approved disposal wells or to S-1372-100's vapor control system . The vapor control system shall be APCO-approved with a vapor control efficiency of at least 99% by weight as determined by the test method specified in section 6.4 of District Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. Before disposal of VOC vapors by well injection, the applicant shall obtain written notification from DOGGR that the wells are approvable for injection. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Maximum VOC content of tank vapor shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The vapor piping to S-1372-100 shall be equipped with a check valve operated to prevent S-1372-100's vapors from entering S-1372-405's vapor space. [District Rule 2201] Federally Enforceable Through Title V Permit
6. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
7. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
10. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
14. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
16. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
17. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Permittee shall maintain records of annual testing demonstrating that the water content of fluids processed by components in water/oil service is greater than 50% by weight [District Rule 2201] Federally Enforceable Through Title V Permit
21. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-406-1

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3000 BBL CRUDE OIL TANK T-180 SERVED BY VAPOR CONTROL SYSTEM LISTED ON TEOR PERMIT S-1372-405

PERMIT UNIT REQUIREMENTS

1. Maximum VOC content of tank vapor shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit
3. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Operator shall conduct quarterly sampling from the tank vapor control system's common header to the vapor control system sample point to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. If 8 consecutive quarterly samplings show compliance, then sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. All vessel and vapor control system piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated to methane, to ensure compliance with the provisions of this permit. If any of the vessel components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no vessel components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 ft above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event shall the total time to minimize and eliminate the leak exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
12. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
13. During a District inspection, any tank, gauge hatch, sampling device, or other component that is not leak free will not be a violation of this permit provided the facility records, tags, and repairs the leak in accordance with the requirements of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Permittee shall maintain a written record of the VOC content of the gas sampled. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Permittee shall maintain records of annual testing demonstrating that the water content of fluids processed by components in water/oil service is greater than 50% by weight [District Rule 2201] Federally Enforceable Through Title V Permit
17. The permittee shall keep accurate records of each organic liquid stored in the tank including TVP and API gravity. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-407-1

EXPIRATION DATE: 05/31/2021

SECTION: NE8 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank crude oil throughput shall not exceed 1,400 bbl/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. True vapor pressure (TVP) of liquids received, held or stored in this tank shall not exceed 0.2 psia. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Tank shall be operated at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emission rate shall not exceed 19.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. TVP testing shall be conducted at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in each tank. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 2201 and District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-408-3

EXPIRATION DATE: 05/31/2021

SECTION: NE19 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

6.6 MMBTU/HR FLARE INDUSTRIES MODEL SF-VP-0616 COANDA EFFECT STANDBY FLARE WITH AUTOIGNITION SERVED BY GAS SCRUBBER; PROPANE AND/OR PUC NATURAL GAS AS PILOT FUEL (19Z LEASE)

PERMIT UNIT REQUIREMENTS

1. The flare shall not operate with visible emissions darker than 5% opacity or 1/4 Ringelmann for a period or periods aggregating more than three minutes in any one hour. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Prior to combustion in the flare, the produced gas shall be routed through the scrubber located at site of the flare. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The scrubber serving the flare shall achieve at least 95% sulfur removal. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
6. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare. The pilot need not be present when the flare is isolated for required flare maintenance. [District Rule 4311] Federally Enforceable Through Title V Permit
7. The flare shall be equipped with a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device capable of continuously detecting at least one pilot flame or the flare flame is present. [District Rule 4311] Federally Enforceable Through Title V Permit
8. Flare shall not be operated continuously for more than 30 consecutive days. Flare is not continuous when flaring has ceased for three (3) or more consecutive hours. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Maximum amount of gas combusted shall not exceed any of the following limits: 157.8 MMBtu/day and 1,889 MMBtu/year. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
11. H₂S content of flared gas shall not exceed 1,250 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NO_x (as NO₂): 0.068 lb/MMBtu; PM₁₀: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.27 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Gas analysis to demonstrate compliance with the scrubber sulfur removal efficiency shall be conducted at inlet and outlet of the scrubber, under conditions representative of normal operation by an independent testing laboratory. The compliance testing frequency shall be semi-annually [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
14. To show compliance with sulfur emission limits (ppmv as H₂S), the gas being flared shall be tested weekly for sulfur content. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for the flared gas, then the compliance testing frequency shall be semi-annually. If the semi-annual sulfur content test fails to show compliance, weekly testing shall resume. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Using a trained observer as defined in EPA Method 22, operator shall check for visible emissions for a period of 15 minutes each time the flare is brought from standby to active service and at least once every two weeks thereafter as long as the flare is in active service. If visible emissions are detected at any time during this period, the operator shall make the necessary adjustments to eliminate the visible emissions. If the observed visible emissions cannot be eliminated within 24 hours, the operator shall demonstrate compliance with the visible emissions limit of this permit using EPA Method 22 and an observation period of two hours. A record containing the results of these observations shall be maintained, which also includes company name, process unit, observer's name and affiliation, date, estimated wind speed and direction, sky condition, and the observer's location relative to the source and sun. [District Rule 2520] Federally Enforceable Through Title V Permit
16. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP) and all commitments listed in that plan have been met. This standard shall not apply if the APCO determines that the flaring is caused by an emergency as defined in this rule and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 4311] Federally Enforceable Through Title V Permit
17. The operator shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. [District Rule 4311] Federally Enforceable Through Title V Permit
18. Flares that the operator can verify, based on permit conditions, that are not capable of producing reportable flare events pursuant to Section 6.2.2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
19. A Reportable Flare Event is defined as any flaring where more than 500,000 standard cubic feet of vent gas is flared per calendar day, or where sulfur oxide emissions are greater than 500 pounds per calendar day. [District Rule 4311] Federally Enforceable Through Title V Permit
20. Every five years after the initial Flare Minimization Plan (FMP) submittal, the operator shall submit an updated FMP for the flare to the APCO for approval. The current FMP shall remain in effect until the updated FMP is approved by the APCO. If the operator fails to submit an updated FMP, the existing FMP shall no longer be considered an approved plan. [District Rule 4311] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The Flare Minimization Plan (FMP) shall include, but is not limited to, the following: 1) A description and technical specifications for the flare and associated knock-out pots, surge drums, water seals and flare gas recovery systems; 2) Detailed process flow diagrams of all upstream equipment and process units venting to the flare, identifying the type and location of all control equipment; 3) A description of equipment, processes, or procedures the operator plans to install or implement to eliminate or minimize flaring and planned date of installation or implementation; 4) An evaluation of prevention measures to reduce flaring that has occurred or may be expected to occur during planned major maintenance activities, including startup and shutdown; 5) An evaluation of preventative measures to reduce flaring that may be expected to occur due to issues of gas quantity and quality. The evaluation shall include an audit of the vent gas recovery capacity of the flare system, the storage capacity available for excess vent gases, and the scrubbing capacity available for vent gases including any limitations associated with scrubbing vent gases for use as a fuel; and shall determine the feasibility of reducing flaring through the recovery, treatment and use of the gas or other means; 6) An evaluation of preventative measures to reduce flaring caused by the recurrent failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. The evaluation shall determine the adequacy of existing maintenance schedules and protocols for such equipment. A failure is recurrent if it occurs more than twice during any 5-year period as a result of the same cause as identified in accordance with Section 6.2.2; 7) Any other information requested by the APCO as necessary for determination of compliance with applicable provisions of this rule. [District Rule 4311] Federally Enforceable Through Title V Permit
22. Effective on and after January 1, 2024, the operator shall monitor the vent gas flow to the flare with a flow-measuring device or other parameters as specified in this permit. The operator shall determine the heating value (Btu per cubic foot) of the vent gas annually in accordance with Section 6.3.6. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of exceeding the annual throughput thresholds in Table 2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
23. The operator shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311] Federally Enforceable Through Title V Permit
24. The operator shall submit an annual report to the APCO that summarizes all Reportable Flaring Events that occurred during the previous 12-month period. Beginning January 1, 2024, the report shall be submitted within 30 days following the end of the previous calendar year. The report shall include, but not limited to, the information stated in Section 6.2.2 of this rule. [District Rule 4311] Federally Enforceable Through Title V Permit
25. Until January 1, 2024, the operator shall submit an annual monitoring report to the APCO within 30 days following the end of each 12-month period. On and after January 1, 2024, and annually thereafter, the operator shall submit the annual monitoring report in an electronic format approved by the District to the APCO within 30 days following the end of each calendar year for all required monitoring under those sections. The report shall include the applicable data stated in Section 6.2.3 of this rule. [District Rule 4311] Federally Enforceable Through Title V Permit
26. Compliance with the requirements of Rule 4311 shall be determined by the following test methods: VOC (as carbon), EPA Method 25; NOx in lb/MMBtu, EPA Method 19; NOx and O2 concentrations, EPA Methods 3A or 7E, or ARB Method 100. [District Rule 4311] Federally Enforceable Through Title V Permit
27. The vent gas flow shall be determined using one or more of the following methods: EPA Methods 1 and 2; a verification method recommended by the manufacturer of the flow monitoring equipment; tracer gas dilution or velocity; or other flow monitors or process monitors that can provide comparison data on a vent stream that is being directed past the ultrasonic flow meter. [District Rule 4311] Federally Enforceable Through Title V Permit
28. The heating value of flare gas shall be determined by ASTM D1826-88 or ASTM D1945-81 in conjunction with ASTM D3588-89; alternately, an operator may elect to use a default heating value from Table 4 of this rule. [District Rule 4311] Federally Enforceable Through Title V Permit
29. The sulfur content of the gas being flared shall be determined using ASTM D1072, D3031, D4084, D3246, or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2201 and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

30. The operator shall keep a copy of the flare minimization plan on site for District inspection upon request. [District Rule 4311] Federally Enforceable Through Title V Permit
31. The operator shall keep a copy annual reports submitted to APCO pursuant Section 6.2. [District Rule 4311] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate records of flared gas higher heating value, daily and annual quantities of produced gas, pilot gas, and sweep gas combusted in the flare, and flared gas concentration of H₂S. [District Rules 2201, 2520, and 4311] Federally Enforceable Through Title V Permit
33. The operator shall maintain records of the monitoring data collected by the vent gas flow measuring device. [District Rule 4311] Federally Enforceable Through Title V Permit
34. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201, 2520, and 4311] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC**MAILING ADDRESS:** 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309**LOCATION:** HEAVY OIL WESTERN STATIONARY SOURCE
CA**SECTION:** NE06 **TOWNSHIP:** 30S **RANGE:** 22E**PHYSICAL LOCATION:** McKittrick Unit Lease**INSPECT PROGRAM PARTICIPANT:** NO**EQUIPMENT DESCRIPTION:**

1000 BBL FIXED ROOF WASH TANK WITH PV VENT (CYMRIC OIL FIELD)

CONDITIONS

1. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in the conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid, tank may be open, and leak-free conditions pertaining to relief valve shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be enclosed with no holes or openings and shall be subject to normal leak free requirements pertaining to relief valve. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Tank shall be operated at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
8. True vapor pressure of any liquid placed or stored in this tank shall not exceed 0.1 psia. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Daily average tank crude oil throughput shall not exceed 20 barrels per day. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Permittee shall conduct True Vapor Pressure (TVP) and API gravity testing of the crude oil stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
12. In lieu of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP testing of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. [District Rule 4623, 6.2.1] Federally Enforceable Through Title V Permit

13. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323-94, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 20 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
14. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 (2000) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
15. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
16. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

INSPECTION
WORKSHEET
EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC

MAILING ADDRESS: 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: NE06 **TOWNSHIP:** 30S **RANGE:** 22E

PHYSICAL LOCATION: McKittrick Unit Lease

INSPECT PROGRAM PARTICIPANT: NO

EQUIPMENT DESCRIPTION:
200 BBL FIXED ROOF STOCK TANK WITH PV VENT (CYMRIC OIL FIELD)

CONDITIONS

1. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
2. While dormant, tank shall be emptied of all fluid, tank may be open, and leak-free conditions pertaining to relief valve shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
3. Upon recommencing operation of this unit, tank shall be enclosed with no holes or openings and shall be subject to normal leak free requirements pertaining to relief valve. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2080] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Tank shall be operated at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
8. True vapor pressure of any liquid placed or stored in this tank shall not exceed 0.1 psia. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Daily average tank crude oil throughput shall not exceed 20 barrels per day. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
11. Permittee shall conduct True Vapor Pressure (TVP) and API gravity testing of the crude oil stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit
12. In lieu of testing each uncontrolled fixed roof tank, the permittee may conduct a TVP testing of the organic liquid stored in a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 are met. [District Rule 4623, 6.2.1] Federally Enforceable Through Title V Permit

13. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323-94, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range of greater than 20 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit
14. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287-92 (2000) e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057-95 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623, 6.4.2] Federally Enforceable Through Title V Permit
15. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
16. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-411-4

EXPIRATION DATE: 05/31/2021

SECTION: SE 10 **TOWNSHIP:** 29 S **RANGE:** 21 E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME G-LE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR #68)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]
3. While dormant, normal source testing shall not be required. [District Rule 2080]
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. The refractory curing period is the time required to gradually increase the firing rate and internal temperature of a unit to thermally temper and set the optimal properties of new refractory material that has been installed as part of a unit's initial commissioning or has been replaced as part of a subsequent maintenance or repair procedure. The refractory curing period following the replacement of material as part of a maintenance or repair procedure shall not exceed 30 hours total of actual burner operation per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During any refractory curing period, operator shall limit emissions to the extent possible by optimizing the performance of the low the NOx burner and flue gas recirculation system as can be accommodated by refractory curing activities, by following good work practices and fuel conserving measures and by completing all work in an expeditious manner. Operator shall keep a record of the specific activities undertaken as part of all refractory curing periods and the duration of each activity and shall make the records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
9. This unit shall be equipped with a convection section with at least 235 square feet of heat transfer surface area per MMBtu/hr of maximum rated heat input (verified by manufacturer). [CEQA]
10. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [CEQA]
11. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
12. The steam generator exhaust stack shall be at least 25 feet high. [District Rule 4102]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. Emission rates, except during startup, shutdown and refractory curing, shall not exceed any of the following limits: NOx (as NOx): 7 ppmvd @ 3% O₂, 20.6 lb-NOx/day nor CO: 50 ppmvd @ 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Emission rates shall not exceed any of the following: SOx: 0.00285 lb/MMBtu; PM₁₀: 0.0076 lb/MMBtu; or VOC: 0.0055 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Emissions rate of NOx shall not exceed 6,344 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The permittee shall monitor and record the stack concentration of NOx, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

26. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
31. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
32. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
33. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit
34. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-412-1

EXPIRATION DATE: 05/31/2021

SECTION: NE06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,265 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-100 WITH TWO PERMIT EXEMPT BURNERS (NATURAL GAS FIRED, 5 MMBTU/HR OR LESS)

PERMIT UNIT REQUIREMENTS

1. The unit shall not operate within 2,437 feet of the nearest receptor. [District Rule 4102]
2. The heater treater shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This heater treater shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2080] Federally Enforceable Through Title V Permit
5. The VOC content of heater treater vapor recovery gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
7. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
8. All piping, fittings, and valves on this heater treater shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The heater treater shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, an approved VOC destruction device that reduces the inlet VOC emissions by at least 99% by weight as determined by the test method specified in Rule 4623 Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Operator shall conduct quarterly gas sampling for the heater treater to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
13. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this heater treater at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this heater treater in order to maintain exemption from the rule. [District Rule 2080] Federally Enforceable Through Title V Permit
15. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the heater treater. The permittee shall also conduct an API gravity testing. [District Rule 2080] Federally Enforceable Through Title V Permit
16. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. Permittee shall maintain records of the tank identification number, Permit to Operate number, vapor VOC concentration, type of stored organic liquid, storage temperature, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 2080] Federally Enforceable Through Title V Permit
17. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products". [District Rule 2080] Federally Enforceable Through Title V Permit
18. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-413-1

EXPIRATION DATE: 05/31/2021

SECTION: NW16 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE BURNER AND A FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. The refractory curing period is the time required to gradually increase the firing rate and internal temperature of a unit to thermally temper and set the optimal properties of new refractory material that has been installed as part of a unit's initial commissioning or has been replaced as part of a subsequent maintenance or repair procedure. The refractory curing period following the replacement of material as part of a maintenance or repair procedure shall not exceed 30 hours total of actual burner operation per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit
2. During the initial commissioning period and any refractory curing period, operator shall limit emissions to the extent possible by optimizing the performance of the low NO_x burner and flue gas recirculation system as can be accommodated by individual initial commissioning and refractory curing activities, by following good work practices and fuel conserving measures and by completing all work in an expeditious manner. Operator shall keep a record of the specific activities undertaken as part of the initial commissioning period and all refractory curing periods and the duration of each activity and shall make the records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
4. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. Emission rates, except during startup and shutdown shall not exceed any of the following: NO_x (as NO_x): 5 ppmvd @ 3% O₂; or CO: 30 ppmvd @ 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Emission rates shall not exceed any of the following: SO_x: 0.00285 lb/MMBtu; PM₁₀: 0.003 lb/MMBtu; or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions rate of NO_x shall not exceed 16.3 lb/day or 4,468 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions rate of CO shall not exceed 50.0 lb/day or 16,381 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
13. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
23. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
24. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
25. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit
26. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit
27. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-414-3

EXPIRATION DATE: 05/31/2021

SECTION: SE10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE BURNER AND A FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. This steam generator is approved to operate at the following locations: SE/4 Sec. 10, T29S, R21E and NW/4 Sec. 6, T30S, R22E. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
2. The refractory curing period is the time required to gradually increase the firing rate and internal temperature of a unit to thermally temper and set the optimal properties of new refractory material that has been replaced as part of a subsequent maintenance or repair procedure. The refractory curing period following the replacement of material as part of a maintenance or repair procedure shall not exceed 30 hours total of actual burner operation per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit
3. During the refractory curing period, operator shall limit emissions to the extent possible by optimizing the performance of the low NOx burner and flue gas recirculation system as can be accommodated by the refractory curing activities, by following good work practices and fuel conserving measures and by completing all work in an expeditious manner. Operator shall keep a record of the specific activities undertaken as part of the refractory curing periods and the duration of each activity and shall make the records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
5. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Emission rates, except during startup and shutdown shall not exceed any of the following: NOx (as NOx): 5 ppmvd @ 3% O₂; or CO: 30 ppmvd @ 3% O₂. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Emission rates shall not exceed any of the following: SOx: 0.00285 lb/MMBtu; PM₁₀: 0.003 lb/MMBtu; or VOC: 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions rate of NOx shall not exceed 16.3 lb/day or 4,468 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions rate of CO shall not exceed 50.0 lb/day or 16,381 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
14. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588, VOC (ppmv) - EPA Method 25A or 25B, or ARB Method 100. [District Rule 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Shorter time periods for demonstration of compliance after startup or re-ignition may be approved by the APCO by submittal of appropriate technical justification upon implementation of this ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
24. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
25. If the steam generator is not fired on PUC-regulated natural gas and compliance is achieved through fuel sulfur content limitations, then the sulfur content of the fuel shall be determined by testing sulfur content at a location after all fuel sources are combined prior to incineration, or by performing mass balance calculations based on monitoring the sulfur content and volume of each fuel source. The sulfur content of the fuel shall be determined using the test methods referenced in this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
26. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, permittee shall demonstrate compliance at least annually. [District Rule 4320] Federally Enforceable Through Title V Permit
27. If the unit is fired on PUC-regulated natural gas, valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit
28. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-416-2

EXPIRATION DATE: 05/31/2021

SECTION: 6 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK WITH P/V VALVE CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-220 (STAR FEE)

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-220. [17 CCR 95668]
4. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices out of service, the vapors may be vented to the standby flare listed on permit S-1372-100. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with 17 CCR Section 95671 is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-417-2

EXPIRATION DATE: 05/31/2021

SECTION: NW23 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#71), WITH NORTH AMERICAN GLE ULTRA LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM (DOME)

PERMIT UNIT REQUIREMENTS

1. This steam generator is approved to operate at the following locations: NW/4 Sec. 23, T31S, R22E and NW/4 Sec. 6, T30S, R22E. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Emissions rates shall not exceed 16.7 lb-NOx/day NOx nor 4,617 lb-NOx/yr and 56.6 lb-CO/day nor 13,775 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
14. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-418-2

EXPIRATION DATE: 05/31/2021

SECTION: NW10 **TOWNSHIP:** 29S **RANGE:** 21E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN GLE ULTRA LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM (HOPKINS)

PERMIT UNIT REQUIREMENTS

1. This steam generator is approved to operate at the following locations: NW/4 Sec. 10, T29S, R21E and NW/4 Sec. 6, T30S, R22E. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
10. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Emissions rates shall not exceed 16.7 lb-NOx/day NOx nor 4,617 lb-NOx/yr and 56.6 lb-CO/day nor 13,775 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
14. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. When the unit changes fuel source, the unit shall undergo source testing to measure NOx and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
32. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-419-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3000 BBL FIXED-ROOF SUMP TANK (HOPKINS LEASE, T-5) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The permittee shall conduct API gravity testing upon initial start-up. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
11. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
13. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
15. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
16. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-420-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED-ROOF CLARIFIER TANK (HOPKINS LEASE, T-6) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The permittee shall conduct API gravity testing upon initial start-up. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
11. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
13. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
15. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
16. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-421-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

10,000 BBL FIXED-ROOF CLARIFIER TANK (HOPKINS LEASE, T-7) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-218

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operator shall conduct quarterly sampling of vapor control system gas to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of gas shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start-up, at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
9. The permittee shall conduct API gravity testing upon initial start-up. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
11. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
12. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
13. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Fugitive emissions Inspection and Maintenance (I&M) program pursuant to 17 CCR 95669 shall be implemented. [17 CCR 95669]
15. Annual records of VOC content of vapor control system gas shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
16. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-422-1

EXPIRATION DATE: 05/31/2021

SECTION: NW 7 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-433) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum fuel sulfur content shall not exceed 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The higher heating value of each non-certified fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D 3588. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Except for periods of startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.005 lb-PM10/MMBtu, 35 ppmvd CO @ 3% O2 or 0.026 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
5. Maximum NOx emissions from the steam generator, including start-up and shutdown, shall not exceed 19.7 lb-NOx/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
19. Permittee shall determine sulfur content of combusted gas weekly for eight consecutive weeks. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly sulfur testing shall resume if quarterly testing does not indicate compliance. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. First of the weekly gas analyses shall be done using laboratory analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
20. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
26. Permittee shall maintain daily records of the type and quantity of fuel combusted by the steam generator. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit
28. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-423-1

EXPIRATION DATE: 05/31/2021

SECTION: NW 7 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-434) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum fuel sulfur content shall not exceed 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The higher heating value of each non-certified fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D 3588. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Except for periods of startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.005 lb-PM10/MMBtu, 35 ppmvd CO @ 3% O2 or 0.026 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
5. Maximum NOx emissions from the steam generator, including start-up and shutdown, shall not exceed 19.7 lb-NOx/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
19. Permittee shall determine sulfur content of combusted gas weekly for eight consecutive weeks. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly sulfur testing shall resume if quarterly testing does not indicate compliance. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. First of the weekly gas analyses shall be done using laboratory analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
20. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
26. Permittee shall maintain daily records of the type and quantity of fuel combusted by the steam generator. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit
28. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-424-1

EXPIRATION DATE: 05/31/2021

SECTION: NW 7 **TOWNSHIP:** 30S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-442) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum fuel sulfur content shall not exceed 1.0 gr S/100scf. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The higher heating value of each non-certified fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D 3588. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. Except for periods of startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NOx @ 3% O2 or 0.008 lb-NOx/MMBtu, 0.005 lb-PM10/MMBtu, 35 ppmvd CO @ 3% O2 or 0.026 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4201, 4301, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
5. Maximum NOx emissions from the steam generator, including start-up and shutdown, shall not exceed 19.7 lb-NOx/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Duration of start-up or shutdown shall not exceed two hours each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. At least quarterly, the permittee shall monitor using the methods specified in this permit the higher heating value of each non-certified fuel supplied to this unit, or, alternatively, have the higher heating value certified by the fuel supplier. The records of higher heating value and quantity of fuel combusted shall be used to demonstrate that the rated heat input capacity of this unit, as averaged over a calendar quarter, is not exceeded. [District Rules 2201] Federally Enforceable Through Title V Permit
19. Permittee shall determine sulfur content of combusted gas weekly for eight consecutive weeks. After demonstrating compliance for eight consecutive weeks testing may be conducted on a quarterly basis. Weekly sulfur testing shall resume if quarterly testing does not indicate compliance. Weekly gas analysis shall be performed using Draeger tubes and quarterly analysis using ASTM method D3246 or double GC for H2S and mercaptans. First of the weekly gas analyses shall be done using laboratory analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
20. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
26. Permittee shall maintain daily records of the type and quantity of fuel combusted by the steam generator. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit
28. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-425-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH A NORTH AMERICAN GLE BURNER, OR EQUIVALENT, AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
8. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates shall not exceed 12.0 lb-NO_x/day NO_x nor 3,395 lb-NO_x/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-426-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 4 STEAM DRIVE WELLS

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The operation shall be equipped with production well vent vapor collection piping network, one water cooled heat exchanger, one gas liquid separator and non-condensable vapor shall be incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District Rule 4401] Federally Enforceable Through Title V Permit
4. All wells served by vapor collection system shall be shut in and shall not vent to atmosphere in event of failure of incineration system. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
6. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
7. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
8. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
9. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than the number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
11. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401]
12. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401] Federally Enforceable Through Title V Permit
13. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401] Federally Enforceable Through Title V Permit
14. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401] Federally Enforceable Through Title V Permit
15. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401 [District Rule 4401] Federally Enforceable Through Title V Permit
16. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
17. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401] Federally Enforceable Through Title V Permit
18. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401] Federally Enforceable Through Title V Permit
19. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401] Federally Enforceable Through Title V Permit
20. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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21. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401] Federally Enforceable Through Title V Permit
22. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401] Federally Enforceable Through Title V Permit
23. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401] Federally Enforceable Through Title V Permit
24. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401] Federally Enforceable Through Title V Permit
25. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
26. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
27. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401] Federally Enforceable Through Title V Permit
28. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401] Federally Enforceable Through Title V Permit
29. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
30. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
31. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401] Federally Enforceable Through Title V Permit
32. Operator shall keep a list of all gauge tanks, as defined in Section 3.0 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401] Federally Enforceable Through Title V Permit
33. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401] Federally Enforceable Through Title V Permit
34. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

35. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4401] Federally Enforceable Through Title V Permit
36. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401] Federally Enforceable Through Title V Permit
37. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401] Federally Enforceable Through Title V Permit
38. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
39. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401] Federally Enforceable Through Title V Permit
40. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401] Federally Enforceable Through Title V Permit
41. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401] Federally Enforceable Through Title V Permit
42. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

43. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401] Federally Enforceable Through Title V Permit
44. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit
45. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401] Federally Enforceable Through Title V Permit
46. By January 30 of each year, an operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to an existing Operator Management Plan. [District Rule 4401] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-429-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

18 MMBTU/HR LPG OR NATURAL GAS-FIRED STEAM GENERATOR

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4301] Federally Enforceable Through Title V Permit
6. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
7. Generator shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit
8. If continuous operation oxygen analyzer/controller is utilized, excess O₂ shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions rates from the LPG and/or natural gas-fired unit shall not exceed any of the following limits: 30 ppmv NO_x @ 3% O₂, 0.017 lb-SO_x/MMBtu, 0.008 lb-PM₁₀/MMBtu, 115 ppmv CO @ 3% O₂, or 0.006 lb-VOC/MMBtu. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-430-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL WASH TANK WITH PV VALVE (BAND FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank shall operate at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
4. VOC emission rate from the tank shall not exceed 4.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Permittee shall maintain accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-431-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL TANK WITH PV VALVE (BAND FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Crude oil throughput shall not exceed 200 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
4. VOC emission rate from the tank shall not exceed 11.2 lb/day. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-432-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL TANK WITH PV VALVE (BAND FEE LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Crude oil throughput shall not exceed 200 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
4. VOC emission rate from the tank shall not exceed 11.2 lb/day. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-433-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL WASH TANK WITH PV VALVE (MIDWAY PACIFIC LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank shall operate at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
4. VOC emission rate from the tank shall not exceed 4.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Permittee shall maintain accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-434-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL TANK WITH PV VALVE (MIDWAY PACIFIC LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Crude oil throughput shall not exceed 200 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
4. VOC emission rate from the tank shall not exceed 11.2 lb/day. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-435-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL TANK WITH PV VALVE (MIDWAY PACIFIC LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Crude oil throughput shall not exceed 200 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
4. VOC emission rate from the tank shall not exceed 11.2 lb/day. [District Rule 2201]
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Permittee shall maintain accurate monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-436-1

EXPIRATION DATE: 05/31/2021

SECTION: 22 **TOWNSHIP:** T32S **RANGE:** 23E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#81) WITH A NORTH AMERICAN G-LE STANDARD BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. The equipment authorized by this permit shall only operate within either of the following locations: Section 6, Township 30S, Range 22E or Section 22, Township 32S Range 23E. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0061 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates during startup and shutdown shall not exceed 0.0182 lb-NO_x/MMBtu or 0.0739 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Emissions shall not exceed any of the following limits, where annual limits are based on a rolling 12 month period: 16.6 lb-NOx/day, 4,542 lb-NOx/yr, 5.8 lb-SOx/day, 2,122 lb-SOx/yr, 6.1 lb-PM10/day, 2,234 lb-PM10/yr, 56.6 lb-CO/day, 13,775 lb-CO/yr, 6.1 lb-VOC/day or 2,234 lb-VOC/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Duration of startup and shutdown (combined) shall not exceed 4.0 hr day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure NOx, and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
29. Permittee shall keep daily and cumulative rolling 12 month records of the startup and shutdown durations and number of startup and shutdown occurrences. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Monthly VOC and CO emissions shall be calculated as follows: monthly VOC emissions in lbs/month = total hours of startup and shutdown x 1.5470 and monthly CO emissions in lbs/month = total hours of startup and shutdown x 6.2815. [District Rule 2201] Federally Enforceable Through Title V Permit
31. On a monthly basis, the permittee shall calculate and record the VOC and CO emissions in pounds for the prior 12 calendar month period. [District Rule 2201] Federally Enforceable Through Title V Permit
32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-437-0

EXPIRATION DATE: 05/31/2021

SECTION: NW 7 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#76) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed 16.7 lb-NO_x/day or 4617 lb-NO_x/yr or 55.6 lb-CO/day or 13,775 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates during startup and shutdown shall not exceed 0.018 lb-NO_x/MMBtu or 0.074 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup and shutdown (combined) shall not exceed 4.0 hr day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rule]
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. . [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-438-1

EXPIRATION DATE: 05/31/2021

SECTION: NE7 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#77) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed 16.7 lb-NO_x/day or 4617 lb-NO_x/yr or 55.6 lb-CO/day or 13,775 lb-CO/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates during startup and shutdown shall not exceed 0.018 lb-NO_x/MMBtu or 0.074 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup and shutdown (combined) shall not exceed 4.0 hr day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rule]
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. . [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-439-0

EXPIRATION DATE: 05/31/2021

SECTION: 7 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#78) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed 16.7 lb/day NO_x nor 4617 lb/yr NO_x, 5.8 lb/day SO_x nor 2122 lb/yr SO_x, 6.1 lb/day PM₁₀ nor 2234 lb/yr PM₁₀, 55.6 lb/day CO nor 13,775 lb/yr CO, and 6.1 lb/day VOCs nor 2234 lb/yr VOCs. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates during startup and shutdown shall not exceed 0.018 lb-NO_x/MMBtu or 0.074 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup and shutdown (combined) shall not exceed 4.0 hr day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320]
19. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. . [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-440-0

EXPIRATION DATE: 05/31/2021

SECTION: 7 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#79) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
4. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. Emissions shall not exceed 16.7 lb/day NO_x nor 4617 lb/yr NO_x, 5.8 lb/day SO_x nor 2122 lb/yr SO_x, 6.1 lb/day PM₁₀ nor 2234 lb/yr PM₁₀, 55.6 lb/day CO nor 13,775 lb/yr CO, and 6.1 lb/day VOCs nor 2234 lb/yr VOCs. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except during startup and shutdown, emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.003 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Emissions rates during startup and shutdown shall not exceed 0.018 lb-NO_x/MMBtu or 0.074 lb-CO/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Duration of startup and shutdown (combined) shall not exceed 4.0 hr day. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure NO_x, and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SO_x - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H₂S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. . [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Permittee shall maintain records of duration of each start-up and shutdown for a period of five years and make such records readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-441-0

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF CRUDE OIL STORAGE/CLARIFIER TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-220 (STAR FEE)

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Except during maintenance, vessel shall be connected to the vapor collection system listed on S-1372-220. [17 CCR 95668]
4. The vapors may only be vented to a non-destructive vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not result in emissions of nitrogen oxides (NO_x); or, a vapor control device that achieves at least 95 percent vapor control efficiency of total emissions and does not generate more than 15 parts per million volume (ppmv) NO_x when measured at 3 percent oxygen and does not require the use of supplemental fuel gas, other than gas required for a pilot burner, to operate. [17 CCR 95671]
5. Vapor collection systems and control devices are allowed to be taken out of service for up to 30 calendar days per calendar year for performing maintenance. In lieu of taking the vapor collection systems and control devices out of service, the vapors may be vented to the standby flare listed on permit S-1372-100. A time extension to perform maintenance not to exceed 14 calendar days per calendar year may be granted by the ARB Executive Officer. The owner or operator is responsible for maintaining a record of the number of calendar days per calendar year that the vapor collection system or vapor control device is out of service and shall provide a record of such activity at the request of the District. If an alternate vapor control device compliant with 17 CCR Section 95671 is installed prior to conducting maintenance and the vapor collection and control system continues to collect and control vapors during the maintenance operation consistent with the applicable standards specified in 17 CCR Section 95671, the event does not count towards the 30 calendar day limit. Vapor collection system and control device shutdowns that result from utility power outages are not subject to enforcement action provided the equipment resumes normal operation as soon as normal utility power is restored. Vapor collection system and control device shutdowns that result from utility power outages do not count towards the 30 calendar day limit for maintenance. [17 CCR 95671(f)(1)(2)(3)]
6. Fugitive emissions inspections and repairs pursuant to Leak Detection and Repair 17 CCR 95669 shall be implemented for subject equipment. [17 CCR 95669]
7. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-442-0

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL DRAIN TANK WITH PVRV

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings [District Rule 2201] Federally Enforceable Through Title V Permit
2. Crude oil throughput shall not exceed 10 barrels per day based on a monthly average. [District Rule 2201]
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623]
4. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 2201]
5. This tank shall be in a leak free condition. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623. [District Rule 2201]
6. VOC emission rate from the tank shall not exceed 1.8 lb/day [District Rule 2201]
7. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623]
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623]
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623]
10. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623]
11. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623]
13. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-443-0

EXPIRATION DATE: 05/31/2021

SECTION: 06 **TOWNSHIP:** 30S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF CRUDE OIL STORAGE/CLARIFIER TANK SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON S-1372-323

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
3. A leak free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation, even if it is under the voluntary inspection and maintenance program. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-448-0

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

300 BBL FIXED ROOF CONSTANT LEVEL BLOWDOWN/DRAIN TANK WITH PV VALVE (E&M LEASE)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
4. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
5. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. Crude oil throughput shall not exceed 25 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC emission rate from the tank shall not exceed 0.4 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit
8. This tank shall be in a leak-free condition. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start up and at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
10. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
11. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
15. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-449-0

EXPIRATION DATE: 05/31/2021

SECTION: 10 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL FIXED ROOF CRUDE OIL DRAIN TANK WITH PV VALVE (E&M LEASE)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.11 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Crude oil throughput shall not exceed 10 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC emission rate from the tank shall not exceed 0.5 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start up and at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
10. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-450-0

EXPIRATION DATE: 05/31/2021

SECTION: 23 **TOWNSHIP:** 31S **RANGE:** R22E

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL TANK WITH PVRV (DOME LEASE)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.15 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Crude oil throughput shall not exceed 20 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC emission rate from the tank shall not exceed 0.5 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank upon initial start up and at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
10. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 2201]
11. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 4623] Federally Enforceable Through Title V Permit
13. Permittee shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

INSPECTION
WORKSHEET
EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC

MAILING ADDRESS: 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: SE23 **TOWNSHIP:** 11N **RANGE:** 23W

INSPECT PROGRAM PARTICIPANT: NO

EQUIPMENT DESCRIPTION:

1.9 MMBTU/HR VERTICAL HEATER TREATER FIRED ON LEASE GAS (RIPLEY-TATUM LEASE)

CONDITIONS

1. Orifice plates shall have a visible ID tab to confirm orifice plate installation and orifice plate sizing. [District Rule 2050] Federally Enforceable Through Title V Permit
2. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4301] Federally Enforceable Through Title V Permit
3. The sulfur compounds concentration in the fuel gas shall not exceed 1 grain S/100 dscf (17 ppmv H₂S). [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
4. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 83 ppmvd NO_x @ 3% O₂ or 0.1 lb-NO_x/MMBtu, 0.003 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 115 ppmvd CO @ 3% O₂ or 0.084 lb-CO/MMBtu, 13 ppmvd VOC @ 3% O₂ or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
5. Testing to demonstrate compliance with the production gas fuel sulfur content limit shall be conducted weekly. Once eight (8) consecutive weekly tests show compliance, the fuel sulfur content testing frequency may be reduced to semi-annually. If a semi-annual test shows violation of the sulfur content limit, then weekly testing shall resume and continue until eight (8) consecutive tests show compliance. Once compliance is shown on eight (8) consecutive weekly tests, then testing may return to semi-annually. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Sulfur content of the production gas being fired in the heater treater shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or double GC for H₂S and mercaptans. [District Rule 1081] Federally Enforceable Through Title V Permit

EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC

MAILING ADDRESS: 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: SE23 **TOWNSHIP:** 11N **RANGE:** 23W

INSPECT PROGRAM PARTICIPANT: NO

EQUIPMENT DESCRIPTION:

0.5 MMBTU/HR TANK HEATER FIRED ON LEASE GAS (RIPLEY-TATUM LEASE)

CONDITIONS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [Kern County Rule 407, District Rules 4301 and 4801] Federally Enforceable Through Title V Permit

EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC**MAILING ADDRESS:** 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309**LOCATION:** HEAVY OIL WESTERN STATIONARY SOURCE
CA**SECTION:** SE23 **TOWNSHIP:** 11N **RANGE:** 23W**INSPECT PROGRAM PARTICIPANT:** NO**EQUIPMENT DESCRIPTION:**25.2 MMBTU/HR NATIONAL CO S/N S8736 NATURAL GAS/PROPANE/PRODUCTION GAS-FIRED STEAM
GENERATOR WITH BURNER DIFFUSER PLATE AND FLUE GAS RECIRCULATION (FGR)

CONDITIONS

1. The fuel supply line shall be physically disconnected from this unit. [District Rule 4320] Federally Enforceable Through Title V Permit
2. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 4320] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 4320] Federally Enforceable Through Title V Permit
4. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Emissions from the natural gas/propane/production gas-fired unit shall not exceed any of the following limits: 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOx/MMBtu, 0.05 lb-SOx/MMBtu, 0.0044 lb-PM10/MMBtu, 100 ppmvd CO @ 3% O2 or 0.074 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4801] Federally Enforceable Through Title V Permit
7. H2S concentration shall not exceed 1,000 ppm in lease gas. Testing to measure lease gas sulfur content shall be conducted using ASTM D3246 oxidation combustion microcoulometric or ASTM D6228 double GC for H2S and mercaptans. [District Rules 1081 and 4801] Federally Enforceable Through Title V Permit
8. Compliance with sulfur limit shall be verified by lease gas sulfur sample no less than every calendar quarter in which the unit is operated. [District Rule 1081] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
12. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
18. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of recommencing operation of this unit. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
22. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

23. Permittee shall maintain daily records of volume of fuel gas burned and lease gas incinerated, calendar quarterly lease and fuel gas sulfur content and BTU content. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. The permittee shall maintain records of fuel hhv, lease gas sulfur content and cumulative annual fuel use. [District Rule 2201] Federally Enforceable Through Title V Permit
26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-464-0

EXPIRATION DATE: 05/31/2021

SECTION: SE23 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION INCLUDING 99 CYCLICALLY STEAMED ENHANCED CRUDE OIL PRODUCTION WELLS WITH CASING COLLECTION SYSTEM CONNECTED TO SALES GAS PIPELINE AND OPTIONAL SULFUR REMOVAL SYSTEM

PERMIT UNIT REQUIREMENTS

1. Vapors from the well vents shall be treated by SulfaTreat system prior to incineration. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Sulfa Treat system shall be used as necessary to ensure that sulfur content of gas combusted in steam generator S-1372-469 shall not exceed 1 gr S/ 100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Well vent vapor from this operation shall only be incinerated in vapor control equipment listed in permits S-1372-458, -459, -463, or -469. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain accurate component count for TEOR operation according to CAPCOA's "California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities," Table IV-2c (Feb 1999), Screening Value Range emission factors. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Fugitive VOC emission rate shall not exceed 2.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The permittee shall keep accurate records of component counts for a period of five years and shall make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
10. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system. [District Rule 4401, 5.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Permittee shall install and maintain an APCO-approved VOC collection and control system that is not open to the atmosphere and that is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to an APCO-approved control device that has a VOC destruction or removal efficiency of at least 99%, or that transports gases or vapors back to a process system. [District Rules 2201 and 4401, 5.1] Federally Enforceable Through Title V Permit
12. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
13. The permittee shall not use any components that leak in excess of the applicable leak standards as specified in this permit. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
14. Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
15. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
16. In accordance with the approved OMP, permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
17. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
18. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
19. During District compliance inspection, the following conditions shall be used to determination of a violation: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak; 3) Existence of a component with a gas leak greater than 50,000 ppmv; or 4) Existence of a component leak consisting of a minor liquid or gas leak, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv, in excess of the allowable number of leaks specified in Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
20. Permittee shall keep all hatches closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
21. Except for pipes and unsafe-to-monitor components, permittee shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.1 & 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Permittee shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit
23. Permittee shall inspect audio-visually (by hearing and by sight) for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service at least once each calendar week. [District Rule 4401, 5.4.3.1] Federally Enforceable Through Title V Permit
24. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3.2] Federally Enforceable Through Title V Permit
25. Permittee shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. Permittee shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401, 5.4.4.1] Federally Enforceable Through Title V Permit
26. Permittee shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401, 5.4.4.2] Federally Enforceable Through Title V Permit
27. Except for PRDs, permittee shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4.3] Federally Enforceable Through Title V Permit
28. Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
29. Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401, 5.5.2] Federally Enforceable Through Title V Permit
30. Permittee shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
31. Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
32. The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 3 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
33. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

34. Permittee shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identity and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
35. Permittee shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
36. Annual control efficiency compliance tests shall be performed by source testers certified by the California Air Resource Board (CARB) on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive these source testing requirements if the vapor control system does not exhaust to atmosphere, or if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine, or in a smokeless flare. [District Rule 4401, 6.2.1 & 6.2.2] Federally Enforceable Through Title V Permit
37. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
38. VOC content shall be determined using ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
39. VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
40. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Permittee shall maintain at the facility the copies of the training records of the training program. [District Rule 4401, 6.1.6 & 6.5] Federally Enforceable Through Title V Permit
41. Unless the source testing requirement is waived by the District, permittee shall maintain source test records which show that the control efficiency requirements of the VOC collection and control system have been satisfied. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
42. Permittee shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

43. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-469-0

EXPIRATION DATE: 05/31/2021

SECTION: SE14 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR C.E. NATCO GAS/CASING GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE LOW-NOX BURNER AND FLUE GAS RECIRCULATION (HOPCO, H-2, DIS# 39454-87)

PERMIT UNIT REQUIREMENTS

1. The following locations are approved for the operation of this equipment: SE/23, T 11N, 23 W; SE14, 31S, 22E; SW14, 31S, 22E. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No modification to this unit shall be performed without an Authority to Construct for such modifications(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
3. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit
4. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit if unit has not been previously source tested as per schedule required by Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. Operators shall notify the District at least seven (7) calendar days prior to commencing operation of this dormant emissions unit, at which time this permit will be administratively modified to remove DEU references. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
9. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102] Federally Enforceable Through Title V Permit
10. Sulfur removal equipment shall be installed as necessary to ensure that gaseous fuels other than propane contain no more than 1.0 gr S/100 scf before combustion. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
11. The unit shall only be fired on PUC-quality natural gas, propane, or produced/TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Sulfur content of propane shall not exceed 15 grain per 100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Sulfur content of combusted produced/TEOR gas shall not exceed 1 gr S/ 100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. When fired on natural gas or produced/TEOR gas, emissions rates from the unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. When fired on propane, emissions rates from the unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.0166 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Upon recommencing operation, permittee shall determine sulfur content of scrubbed produced gas weekly for eight consecutive weeks. Once eight (8) consecutive weekly tests show compliance, the fuel sulfur content testing frequency may be reduced to semi-annually. If a semi-annual test shows violation of the sulfur content limit, then weekly testing shall resume and continue until eight (8) consecutive tests show compliance. Once compliance is shown on eight (8) consecutive weekly tests, then testing may return to semi-annually. Weekly gas analysis shall be performed using Draeger tubes and semi-annual analysis using ASTM method D3246 or double GC for H₂S and mercaptans. First of the weekly gas analyses shall be done using laboratory analysis. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
17. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Upon recommencing operation, the permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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22. Upon recommencing operation, the permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Compliance with the fuel gas sulfur compound concentration requirement may be demonstrated by firing the unit only on PUC regulated natural gas, or by fuel analysis. [District Rule 2201] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Upon recommencing operation, source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, stack gas moisture content - EPA Method 4, stack gas velocities - EPA Method 2, and fuel gas sulfur content - ASTM D1072, ASTM D3246, ASTM D6228 (GC-FPD) or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. On and after July 1, 2010, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320] Federally Enforceable Through Title V Permit
32. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

INSPECTION
EXPIRATION DATE: 05/31/2021
WORKSHEET

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC

MAILING ADDRESS: 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

INSPECT PROGRAM PARTICIPANT: NO

EQUIPMENT DESCRIPTION:

250 BBL FIXED ROOF CRUDE OIL STOCK TANK WITH P/V VENT (RIPLEY-TATUM LEASE)

CONDITIONS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not exceeding 0.2 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. Emissions from this tank shall not exceed 2.2 lb VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Throughput for this tank shall not exceed 100 bbl/day on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank, in order to maintain exemption from Rule 4623. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
6. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Operator shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records shall be retained for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC**MAILING ADDRESS:** 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309**LOCATION:** HEAVY OIL WESTERN STATIONARY SOURCE
CA**SECTION:** SE23 **TOWNSHIP:** 11N **RANGE:** 23W**INSPECT PROGRAM PARTICIPANT:** NO**EQUIPMENT DESCRIPTION:**

250 BBL FIXED ROOF CRUDE OIL DRAIN TANK WITH P/V VENT (RIPLEY TATUM LEASE)

CONDITIONS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Crude oil throughput shall not exceed 5 barrels per day based on a monthly average. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank, in order to maintain exemption from Rule 4623. In lieu of testing each uncontrolled fixed roof tank, an operator may conduct a TVP testing of a representative tank provided the requirements of Sections 6.2.1.1.1 through 6.2.1.1.5 of Rule 4623 are met. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method)". Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
6. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
8. Operator shall maintain monthly records of average daily crude oil throughput and shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
10. All records shall be retained for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

INSPECTION
EXPIRATION DATE: 05/31/2021
WORKSHEET

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC

MAILING ADDRESS: 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
CA

SECTION: SE23 **TOWNSHIP:** 11N **RANGE:** 23W

INSPECT PROGRAM PARTICIPANT: NO

EQUIPMENT DESCRIPTION:

300 BBL FIXED ROOF CONSTANT LEVEL CRUDE OIL CLARIFIER TANK WITH P/V VENT (RIPLEY TATUM LEASE)

CONDITIONS

1. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Tank shall be operated at a constant level. [District Rule 2201] Federally Enforceable Through Title V Permit
3. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
7. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products. [District Rule 4623] Federally Enforceable Through Title V Permit
8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall maintain monthly records of average daily crude oil throughput and shall submit such information to the APCO 30 days prior to the expiration date indicated in the Permit to Operate. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP, and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-474-0

EXPIRATION DATE: 05/31/2021

SECTION: NW7 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL FIXED ROOF PRODUCED WATER TANK STORAGE TANK #13857 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-477

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-477-0

EXPIRATION DATE: 05/31/2021

SECTION: NW 7 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL FIXED ROOF TANK WITH A COMPRESSOR, 125,000 BTU/HR HIRT-TYPE VAPOR INCINERATOR WITH LPG PILOT FUEL AND ASSOCIATED CONTROLS AND VAPOR PIPING SHARED WITH PERMIT UNITS S-1372-478, -481 AND -482

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
13. Emissions from the vapor incinerator unit shall not exceed any of the following limits: 0.01 lb-NO_x/MMBtu, 0.0164 lb-SO_x/MMBtu, 0.0077 lb-PM₁₀/MMBtu, 0.082 lb-CO/MMBtu, or 0.011 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-478-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

2000 BBL FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-477

PERMIT UNIT REQUIREMENTS

1. VOC emission rate from vapor service components associated with tank shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from tank using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2C: Oil and Gas Production Screening Value Ranges (<10,000 ppmv) Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
3. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with tank. [District Rule 2201] Federally Enforceable Through Title V Permit
4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
7. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
10. The permittee shall keep accurate records of each organic liquid stored in the tank, including its TVP and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit
13. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit
14. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-479-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

19.0 MMBTU/HR NATURAL GAS/PROPANE-FIRED STEAM GENERATOR WITH GIDEON MODEL MGW-25R1 ULTRA LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
8. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
10. The unit shall only be fired on PUC-regulated quality natural gas, propane, or a combination thereof. [District Rules 2201, 4320 and 4801] Federally Enforceable Through Title V Permit
11. This steam generator is not authorized to incinerate casing gas. [District Rules 2201, 4320 and 4801] Federally Enforceable Through Title V Permit
12. All wells producing from strata steamed by this unit shall be connected to a District-approved emissions control system, have District-approved closed casing vents or be District-approved uncontrolled cyclic wells. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Emissions from the natural gas/propane-fired unit shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.0164 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 35 ppmvd CO @ 3% O₂ or 0.026 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, 4320 and 4801] Federally Enforceable Through Title V Permit
14. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas or propane shall be conducted within 60 days of initiating combustion of each fuel type. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas or propane shall be conducted at least once every twelve (12) months after initial source testing with that fuel type. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Permittee shall maintain daily records of the type and quantity of fuel combusted by the steam generator. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit
30. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-480-1

EXPIRATION DATE: 05/31/2021

SECTION: NW7 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 70 STEAM ENHANCED WELLS WITH OPEN CASING VENTS SERVED BY VAPOR CONTROL SYSTEM INCLUDING COMPRESSOR(S), GAS/LIQUID SEPARATOR, AND 10.4 MMBTU/HR FLARE

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Thermally enhanced oil recovery (TEOR) wells shall be authorized to operate with open or closed casing vents. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
4. Production from TEOR wells operated with closed casing vents shall be sent only to tanks equipped with 99% vapor control. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
5. Vapors from TEOR wells operated with open casing vents shall be sent to only to vapor control system served by a 10.4 MMBtu/hr flare. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
6. For pressure relief devices (PRDs) a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 400 to 10,000 ppmv. For components other than PRDs a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 2,000 to 10,000 ppmv. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401]
7. During District compliance inspection, the following conditions shall be used to determination of a violation: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak; 3) Existence of a component with a gas leak greater than 50,000 ppmv; or 4) Existence of a component leak consisting of a minor liquid or gas leak, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv, in excess of the allowable number of leaks specified in Table 3 of Rule 4401. [District Rule 4401]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. Permittee shall not use any component with a leak as defined in Rule 4401, or that is found to be in violation of the provisions of the Section 5.2.2 "Leak Standards" of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 "Leak Repair Requirements" of Rule 4401. [District Rule 4401]
9. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401]
10. Upon detection of leak, permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information: 1) date and time of leak detection; 2) date and time of leak measurement; 3) for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401]
11. Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401]
12. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401]
13. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following three requirements as soon as practicable but not later than the repair period specified in Table 3: 1) Repair or replace the leaking component, 2) Vent the leaking component to a VOC collection and control system as defined in Section 3.0, or 3) Remove the leaking component from operation. [District Rule 4401]
14. The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 3 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401]
15. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401]
16. Leaks exceeding an instrument reading of 10,000 ppmv are a violation of this permit. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
17. Components shall be inspected quarterly for leaks, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 1070 and 4401] Federally Enforceable Through Title V Permit
18. The flare shall be operated according to the manufacturer's specifications, a copy of which shall be maintained on site. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Flare shall be equipped with total gas volume flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
20. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311 and 40 CFR 60.18(f)(2)] Federally Enforceable Through Title V Permit
21. Flare shall be equipped with a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device capable of continuously detecting at least one pilot flame or the flare flame is present. [District Rule 4311]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. Flare shall be equipped with air assist which shall be utilized when needed to maintain visible emissions below Ringlemann 1/4 and 5% opacity. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit
23. This permit shall not authorize the utilization of any IC engine, or other combustion device requiring a separate permit, for powering the air assist to the flare. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. [District Rule 4311 and 40 CFR 60.18(c)(1)] Federally Enforceable Through Title V Permit
25. Air-assisted flares shall be operated with an exit velocity less than V_{max} , as determined by the equation specified in paragraph 40 CFR 60.18 (f)(6). [District Rule 4311 and 40 CFR 60.18 (c)(5)] Federally Enforceable Through Title V Permit
26. The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip. [District Rule 4311 and 40 CFR 60.18 (f)(4)] Federally Enforceable Through Title V Permit
27. A flame shall be present at all times when combustible gases are vented through this flare. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
28. Flare shall only be used with the net heating value of the gas being combusted being 300 Btu/scf or greater if the flare is air-assisted or steam-assisted. [District Rule 4311 and 40 CFR 60.18 (c)(3)]
29. The net heating value of the gas being combusted in a flare shall be calculated annually, pursuant to 40 CFR 60.18(f)(3) and using EPA Method 18, ASTM D1946, and ASTM D2382. [District Rule 4311 and 40 CFR 60.18 (f)(3-6)]
30. Flaring is prohibited unless it is consistent with an approved flare minimization plan (FMP), pursuant to Section 6.5, and all commitments listed in that plan have been met. This standard does not apply if the APCO determines that the flaring is caused by an emergency as defined by Section 3.7 and is necessary to prevent an accident, hazard or release of vent gas directly to the atmosphere. [District Rule 4311]
31. On and after January 1, 2024, permittee shall limit flaring annual throughput to levels not to exceed 25,000 MMBtu for two consecutive calendar years. [District Rule 4311]
32. Maximum amount of gas combusted in flare shall not exceed 250 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
33. Maximum amount of gas combusted in flare shall not exceed 91,250 MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
34. Sulfur concentration of gas combusted in flare shall not exceed 2.66 gr S/100 scf (45 ppmv H₂S). [District Rule 2201] Federally Enforceable Through Title V Permit
35. VOC content of the collected TEOR vapors shall not exceed 10% by weight. [District Rules 2201 and 4801]
36. Emissions from the flare shall not exceed any of the following limits (based on total gas combusted): NO_x (as NO₂): 0.068lb/MMBtu; PM₁₀: 0.008 lb/MMBtu; CO: 0.37 lb/MMBtu; or VOC: 0.063 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Permittee shall measure the sulfur content of the gas combusted by District witnessed, or authorized, sample collection by ARB certified testing laboratory at startup and annually thereafter or upon change of source of flared gas. Such data shall be submitted to the District within 60 days of sample collection. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
38. The sulfur content of the combusted gas shall be determined using ASTM test methods D-1072, D-3246, D-6228, or double GC for H₂S and Mercaptans. H₂S concentration (ppmv) of the gas shall be determined using ASTM test methods D-1072 or D-4084, using Draeger tube, or by gas supplier test data consistent with the natural gas fuel sulfur content test method listed in this permit. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

39. The higher heating value of the flared gas shall be monitored at least quarterly or upon change of source of flared gas. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
40. Measured heating value and quantity of gas flared shall be used to determine compliance with heat input limits. [District Rule 2201] Federally Enforceable Through Title V Permit
41. The higher heating value (HHV) of the gas introduced into the flare shall be determined using ASTM D1826-88, ASTM 1945-81 in conjunction with ASTM D3588-89, or an alternative method approved by the District. [District Rule 4311]
42. NO_x emissions for source test purposes shall be determined using EPA Method 19 on a heat input basis, or EPA Method 3A, EPA Method 7E, or ARB 100 on a ppmv basis. [District Rule 4311]
43. VOC emissions for source test purposes shall be determined using EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case Method 25a may be used. [District Rule 4311]
44. Oxygen (O₂) concentration of flared gas shall be determined using EPA Method 3A, EPA Method 7E, or ARB 100. [District Rule 4311]
45. Total hydrocarbon content and methane content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, EPA Method 18, or EPA Method 25A or 25B. Hydrogen sulfide content of vent gas shall be determined using ASTM Method D 1945-96, ASTM Method UOP 539-97, ASTM Method D 4084-94, or ASTM Method D 4810-88. [District Rule 4311]
46. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401]
47. VOC content shall be determined using the latest revision of ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by ARB Method 432. [District Rule 4401]
48. VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401]
49. Annual control efficiency compliance tests shall be performed by source testers certified by the California Air Resource Board (CARB) on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive these source testing requirements if the vapor control system does not exhaust to atmosphere, or if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine, or in a smokeless flare. [District Rule 4401]
50. Permittee shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one centimeter or less from the surface of the component interface. [District Rule 4401]
51. Effective on and after January 1, 2024, the operator shall monitor the vent gas flow to the flare with a flow-measuring device or other parameters as specified in this permit. The operator shall determine the heating value (Btu per cubic foot) of the vent gas annually in accordance with Section 6.3.6. The operator shall maintain records pursuant to Section 6.1.7. Flares that the operator can verify, based on permit conditions, are not capable of exceeding the annual throughput thresholds in Table 2 shall not be required to monitor vent gas flow to the flare. [District Rule 4311]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

52. On and after January 1, 2024, if the flare exceeds the annual throughput threshold of 25,000 MMBtu for two consecutive calendar years, the operator shall notify the APCO in writing of the exceedance within 30 days following the end of the second calendar year. By April 15 of the year after the end of the second consecutive calendar year in which an exceedance of the annual throughput threshold in Table 2 occurred, the applicant shall submit an ATC application to modify or replace the flare to meet Table 3 emission limits. [District Rule 4311]
53. The operator shall submit a flare minimization plan (FMP) to the APCO for approval. The FMP shall include, but not be limited to (1) A description and technical specifications for each flare and associated knock-out pots, surge drums, water seals and flare gas recovery systems. (2) Detailed process flow diagrams of all upstream equipment and process units venting to each flare, identifying the type and location of all control equipment. (3) A description of equipment, processes, or procedures the operator plans to install or implement to eliminate or minimize flaring and planned date of installation or implementation. (4) An evaluation of prevention measures to reduce flaring that has occurred or may be expected to occur during planned major maintenance activities, including startup and shutdown. (5) An evaluation of preventative measures to reduce flaring that may be expected to occur due to issues of gas quantity and quality. The evaluation shall include an audit of the vent gas recovery capacity of each flare system, the storage capacity available for excess vent gases, and the scrubbing capacity available for vent gases including any limitations associated with scrubbing vent gases for use as a fuel; and shall determine the feasibility of reducing flaring through the recovery, treatment and use of the gas or other means. (6) An evaluation of preventative measures to reduce flaring caused by the recurrent failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. The evaluation shall determine the adequacy of existing maintenance schedules and protocols for such equipment. For purposes of this section, a failure is recurrent if it occurs more than twice during any five year period as a result of the same cause as identified in accordance with Section 6.2.2. (7) Any other information requested by the APCO as necessary for determination of compliance with applicable provisions of this rule. [District Rule 4311]
54. Every five (5) years after the initial FMP submittal, the operator shall submit an updated FMP for each flare to the APCO for approval. The current FMP shall remain in effect until the updated FMP is approved by the APCO. If the operator fails to submit an updated FMP as required by this section, the existing FMP shall no longer be considered an approved plan. [District Rule 4311]
55. The operator of a flare subject to flare minimization requirements pursuant to Section 5.11 shall monitor the vent gas flow to the flare with a flow measuring device or other parameters as specified in the Permit to Operate. The operator shall maintain records pursuant to Section 6.1.7 of Rule 4311. Flares that the operator can verify, based on permit conditions, are not capable of producing reportable flare events pursuant to Section 6.2.2 of Rule 4311 shall not be required to monitor vent gas flow to the flare. [District Rule 4311]
56. The operator shall notify the APCO of an unplanned flaring event within 24 hours after the start of the next business day or within 24 hours of their discovery, whichever occurs first. The notification shall include the flare source identification, the start date and time, and the end date and time. [District Rule 4311]
57. The operator shall submit a report including for each flaring event: (1) the date, time, and duration of the flaring event. (2) A determine the primary cause and contributing factors of the flaring event. (3) Any prevention measures considered or implemented to prevent recurrence, together with a justification for rejecting any measures that were considered but not implemented. (4) An explanation of why the flaring was an emergency and necessary to prevent accident, hazard or release of vent gas to the atmosphere, or where, due to a regulatory mandate to vent a flare, it cannot be recovered, treated and used as a fuel gas at the facility. Such records shall be retained for a period of at least five years and be made readily available for District inspection upon request. [District Rule 4311]
58. The operator shall submit an Annual Monitoring Report in an electronic format approved by the District to the APCO within 30 days following the end of each calendar year. [District Rule 4311]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

59. The operator shall provide an Annual Monitoring Report per section 6.2.3 of District Rule 4311, consisting of the following: (1) The total volumetric flow of vent gas in standard cubic feet for each day for the previous calendar year. (2) The Hydrogen sulfide content, methane content, and hydrocarbon content of vent gas composition, where applicable pursuant to Section 6.6 of District Rule 4311. (3) If the flow monitor used pursuant to Section 5.13 of District Rule 4311 measures molecular weight, the average molecular weight for each hour of each month. (4) For any pilot and purge gas used, the type of gas used, the volumetric flow for each day and for each month, and the means used to determine flow, as applicable pursuant to Section 6.7 of District Rule 4311. (5) Flare monitoring system downtime periods, including dates and times, as applicable pursuant to Section 6.9 of District Rule 4311. (6) For each day and for each month provide calculated sulfur dioxide emissions, as applicable. A flow verification report for each flare subject to this Rule. (7) The flow verification report shall include flow verification testing pursuant to Section 6.3.5 of District Rule 4311. [District Rule 4311]
60. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Permittee shall maintain at the facility the copies of the training records of the training program. [District Rule 4401]
61. In accordance with the approved OMP, permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401]
62. By January 30 of each year, an operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to an existing Operator Management Plan. [District Rule 4401]
63. Permittee shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401]
64. Permittee shall maintain records of the date and well identification where steam injection or well stimulation occurs, current list of all thermally enhanced production wells associated with this operation with identification of wells operated with closed and open casing vents, leak inspection results, and accurate fugitive component counts of components in gas service and resulting emissions calculated using the emission factors in the CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities, Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999) . [District Rule 4401] Federally Enforceable Through Title V Permit
65. Permittee shall keep accurate records of daily and annual heat input to the flare in MMBtu/day and MMBtu/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
66. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years and made available for District, ARB, and EPA inspection upon request. [District Rules 1070, 2201, 4311 and 4401] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-481-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF CRUDE OIL GAUGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-477

PERMIT UNIT REQUIREMENTS

1. VOC emission rate from vapor service components associated with the tank shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. The permittee shall keep accurate records of each organic liquid stored in the tank, including its TVP and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit
9. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from the tank using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2C: Oil and Gas Production Screening Value Ranges (<10,000 ppmv) Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
10. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with tank. [District Rule 2201] Federally Enforceable Through Title V Permit
11. This permit authorizes tank cleaning, that is not the result of breakdowns or poor maintenance, as a routine maintenance activity. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit
13. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rules 2020 and 2080] Federally Enforceable Through Title V Permit
14. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-482-0

EXPIRATION DATE: 05/31/2021

SECTION: NW S7 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO THE VAPOR RECOVERY CONTROL SYSTEM LISTED ON S-1372-477 (HOYT LEASE)

PERMIT UNIT REQUIREMENTS

1. VOC emission rate from vapor service components associated with the tank shall not exceed 0.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit
4. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 e1 "Standard Test Method for API Gravity of Crude Petroleum and Petroleum Products (Hydrometer Method). Sampling for API gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit
5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit
6. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit
8. There shall be no leaks exceeding 10,000 ppmv from fugitive emissions components associated with tank. [District Rule 2201] Federally Enforceable Through Title V Permit
9. This permit authorizes tank cleaning, that is not the result of breakdowns or poor maintenance, as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit
10. Permittee shall comply with all applicable Tank Interior Cleaning Program requirements specified in Table 3 of Rule 4623. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Permittee shall maintain records of annual tank inspections, maintenance, and cleaning to document the participation in the Rule 4623 Fixed Roof Tank Preventative Inspection, Maintenance and Tank Interior Cleaning Program. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions from the tank using California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2C: Oil and Gas Production Screening Value Ranges (<10,000 ppmv) Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The permittee shall keep accurate records of each organic liquid stored in the tank, including its TVP and API gravity. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit
14. All records shall be maintained for a period of at least five years and made available for District inspection upon request. [District Rules 1070 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-483-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

10 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH TWO SEPARATE 5.0 MMBTU/HR LOW NOX BURNERS CONNECTED TO VAPOR CONTROL SYSTEM S-1372-480

PERMIT UNIT REQUIREMENTS

1. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201, 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. Heater treater shall only be fired on PUC-regulated natural gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Emission rates shall not exceed: NO_x (as NO_x): 9 ppmvd @ 3% O₂ or 0.011 lb-NO_x/MMBtu PM₁₀: 0.007 lb/MMBtu; CO: 50 ppmvd @ 3% O₂ or 0.037 lb-CO/MMBtu; or VOC: 0.002 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
8. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
9. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O2) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; SOx - EPA Method 6C or 8 or ARB Method 100; fuel gas sulfur as H2S content - EPA Method 11 or 15; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. If the NOx or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. All NOx, CO, and O2 emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NOx, CO, and O2 analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4102, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NOx, CO and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
20. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
21. Permittee shall maintain accurate records of valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts used to satisfy the fuel sulfur content analysis of fuel combusted in process heater, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
22. The permittee shall keep accurate records of the date VOC sampling occurred, who performed the sampling and testing, and the results. [District Rule 2520] Federally Enforceable Through Title V Permit
23. Permittee shall comply with all applicable testing, recordkeeping, and reporting requirements specified in Rule 4001 - New Source Performance Standards, including but not limited to Subparts A and Ja. [District Rule 4001] Federally Enforceable Through Title V Permit
24. All monitoring data, support information and records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-485-0

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

16.5 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE WITH REDUCED WASTE GAS FLOW TO NO MORE THAN 4.9 MMBTU/HR

PERMIT UNIT REQUIREMENTS

1. Capacity of flare shall not exceed 4.9 MM Btu/hr. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
2. Except for the pilot, the gas inlet to flare shall be equipped with recording flow rate meter. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
3. Operator shall demonstrate the heat input capacity of the flare daily by calculation, using the metered volume of the gas delivered to the flare and the most current measured heating value of the gas stream. Except for the pilot, heating value for the gas stream shall be determined at least once every six months by sample analysis. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1/4 or 5% opacity. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Air-assist blower shall be maintained and operated for smokeless combustion. [District Rules 2201 and 4101] Federally Enforceable Through Title V Permit
6. Flare shall be equipped with continuous pilot fired solely on propane or natural gas consisting primarily of methane containing no more than 0.75 grains of total sulfur per 100 standard cubic feet of gas and no more than 5% by weight hydrocarbons heavier than butane. [District Rules 2201 and 4311] Federally Enforceable Through Title V Permit
7. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311] Federally Enforceable Through Title V Permit
8. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311] Federally Enforceable Through Title V Permit
9. Pilot gas flow rate to flare shall not exceed 100 scf per hour. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311] Federally Enforceable Through Title V Permit
11. Open flares in which the flare gas pressure is less than 5 psig shall be operated in such a manner that meets the provisions of 40 CFR 60.18. [District Rule 4311, 5.6] Federally Enforceable Through Title V Permit
12. Sulfur content of produced (TEOR) gas combusted shall not exceed 500 ppmv. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Emissions from this permit unit shall not exceed any of the following: PM10: 0.008 lb/MMBtu; NO_x (as NO₂): 0.068 lb/MMBtu; VOC: 0.063 lb/MMscf; or CO: 0.37 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall determine sulfur content of gas flared monthly using ASTM method D3246 or double GC for H₂S and mercaptans. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Permittee shall maintain accurate records of daily heat inputs to the flare in MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Permittee shall maintain records of monthly measurements of total sulfur content of flared gas. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. All records, including required monitoring data and support information, shall be maintained and retained for a period of 5 years and made available for inspection at any time. [District Rules 1070 and 4311] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-486-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

20 MMBTU/HR TEOR GAS AND NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE MODEL 4211-21/X1288 LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Steam generator shall operate only in Sections 7, 18, 19, and 20 , T11N, R23W, Section 13 T11N, R24W, Section 24 T26S R20E, Sections 14 and 15 T31S, R22E. [District Rule 4102]
8. Exhaust gas stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA Test Methods. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
9. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
10. Unit shall not operate within 2,500 feet of the nearest receptor. [District Rule 4102]
11. Steam generator shall only be fired on produced (TEOR) gas, PUC quality natural gas, or gas containing less than 50% by volume PUC quality natural gas with a sulfur content not exceeding 5.0 gr S/100 scf or scrubbed to remove 95% sulfur. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
12. Except when the fuel is less than 50% by volume PUC quality gas and during startup and shutdown, NOx emission rates shall not exceed 9 ppmv @ 3% O₂. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. When the fuel is less than 50% by volume PUC quality gas, NO_x emission rates shall not exceed 12 ppmv @ 3% O₂. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
14. Emission rates shall not exceed any of the following: PM₁₀: 0.0117 lb/MMBtu, VOC: 0.008 lb/MMBtu or CO: 154 ppmvd @ 3% O₂. [District Rule 2201, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The portable analyzer shall be calibrated prior to each use with a two-point calibration method (zero and span). Calibration shall be performed with certified calibration gases. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
20. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after are-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. If permittee fails any compliance demonstration for NOx and CO emissions when testing not less than once every 36 months, source testing for NOx and CO emissions shall be conducted not less than once every 12 months. [District Rules 2520, 4305, 4606 and 4320] Federally Enforceable Through Title V Permit
28. Fuel H2S , total sulfur, and methane content of combusted gas shall be determined whenever there is a change in fuel type and semi-annually thereafter using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit
29. Permittee shall maintain records of the types (TEOR and/or PUC quality natural gas), fuel sulfur content and % volume of PUC quality natural gas, higher heating value, and quantities of fuel gas combusted each day. [District Rule 1070] Federally Enforceable Through Title V Permit
30. The following test methods shall be used : NOx (ppmv)- EPA Method 7E or ARB Method 100, NOx (lb/MMBtu); EPA Method 19, CO (ppmv)- EPA Method 10 or 10B or ARB Method 100, stack gas oxygen- EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu)- ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content- EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv- ASTM 01826 or 01945 in conjunction with ASTM 03588. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-487-0

EXPIRATION DATE: 05/31/2021

SECTION: 18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY (TEOR) OPERATION WITH 325 CYCLIC WELLS SERVED BY A CASING VENT VAPOR CONTROL SYSTEM WITH LIQUID KNOCKOUT(S), HEAT EXCHANGER(S), H₂S SULFA TREAT CONTACTOR VESSEL(S), AND COMPRESSOR(S) OR OPERATED WITH CLOSED CASING VENTS LOCATED IN THE EAST HALF OF SECTION 13, T11N, R24W AND SECTIONS 7, 18, 19, AND 20 T11N, R23W

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All emissions units shall always operate at least 2,900 feet away from the nearest receptor. [District Rule 4102]
3. When operated with closed casing vents production (with entrained TEOR gas) shall be sent to tanks S-1372-489 through '-498. Vapor from tank vapor control system '-489 will be scrubbed as necessary to maintain compliance with sulfur permit limits listed on steam generators '-486 and '-488, steam generator '-541, and flare '-485. [District Rule 2201] Federally Enforceable Through Title V Permit
4. When operated with open- or closed- casing vents, CVR-TEOR/TVR gas shall be scrubbed to mitigate sulfur compounds by at least 95% prior to being incinerated in Permit Units S-1372-485, '-486, '-488, and '-541; otherwise, said gas will be managed and balanced within the CVR-TEOR/TVR system and/or retention system, such as reinjection into the field. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC emissions from this casing vapor control system (CVCS) shall not exceed 0.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of the vapor processed through this operation shall not exceed 10% by weight. Permittee shall sample and record the VOC content of the vapor at least once every 12 months. The sample shall be taken on the main vapor line after all individual vapor streams are combined and prior to the sulfur scrubbers. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
7. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401; the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rules 2201 and 4401, 5.5.1 and 5.5.2] Federally Enforceable Through Title V Permit
8. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
10. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
11. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit
12. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401, 5.4.1] Federally Enforceable Through Title V Permit
13. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.2] Federally Enforceable Through Title V Permit
14. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3] Federally Enforceable Through Title V Permit
15. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4] Federally Enforceable Through Title V Permit
16. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit
17. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.6] Federally Enforceable Through Title V Permit
18. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. Notwithstanding the above, wells that are not operating are exempt from these requirements while undergoing service or repair. [District Rule 4401, 4.0, 5.2.2] Federally Enforceable Through Title V Permit
19. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. Notwithstanding the above, wells that are not operating are exempt from these requirements while undergoing service or repair. [District Rule 4401, 4.0, 5.2.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
21. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
22. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
23. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
24. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
25. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
26. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
27. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
28. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
29. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
30. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
31. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
32. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
34. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
35. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
36. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit
37. Operator shall keep a list of all gauge tanks, as defined in Section 3.17 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
38. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
39. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
40. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit
41. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit
42. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
43. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
44. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

45. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
46. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
47. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
48. In accordance with the approved Operator Management Plan (OMP), permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
49. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
50. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-488-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

20.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH ACT GIDEON MGW-25 LOW NOX BURNER AND INDUCED FLUE GAS RECIRCULATION OPERATED AT VARIOUS SPECIFIED LOCATIONS WITHIN THE STATIONARY SOURCE

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The permittee shall maintain a non-resettable, totalizing mass or volumetric flow meter in each fuel line to the steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
4. Approved locations for this equipment: Sections 7, 8, 18, 19 and 20, T11N, R23W, Section 13, T11N, R24W, Section 15, T31S, R22E, Section 17, T29S, R21E, and Section 24, T26S, R20E. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Unit shall not be located within 1000 feet of any K-12 school. [CH&SC 42301.6]
6. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Flue gas recirculation system shall be operated at all times when steam generator is in use. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Steam generator shall be fired only on produced (TEOR) gas and/or PUC quality natural gas with a combined sulfur content not to exceed 5.0 gr-S/100 dscf. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. Emissions from the steam generator shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb; NO_x/MMBtu, 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu, 0.0076 lb-PM₁₀/MMBtu, or 0.0055 lb; VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. If the unit is fired on noncertified gaseous fuel then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Copies of fuel supplier sulfur content certification, and test results to determine compliance with the conditions of this permit shall be maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Except for certified gaseous fuels, all fuel sources shall be tested for sulfur content within 30 days of using the fuel source as fuel in the steam generator and at least once every 12 months thereafter. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100 [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. 24. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of this emissions unit, or any malfunction of the air pollution control equipment. [District Rule 4001 and 40CFR60, Subpart A] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-489-0

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL WELDED FIXED ROOF WASH TANK WITH VAPOR RECOVERY SYSTEM VENTED TO THE CASING GAS GATHERING SYSTEM AND APPROVED INCINERATION DEVICES STEAM GENERATORS S-1372-486, '-488, '-541 AND/OR FLARE S-1372-485 AND SERVING TANKS S-1372-490 THROUGH '-498

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-490-0

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM
LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-491-0

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM
LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-492-0

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,500 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM
LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
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4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-493-0

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

600 BBL FWKO UNIT CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-494-0

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

107 BBL WEMCO UNIT CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-495-0

EXPIRATION DATE: 05/31/2021

SECTION: NW18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

1,000 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM
LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

EXPIRATION DATE: 05/31/2021

LEGAL OWNER OR OPERATOR: SENTINEL PEAK RESOURCES CA LLC**MAILING ADDRESS:** 1200 DISCOVERY DR, STE 500
BAKERSFIELD, CA 93309**LOCATION:** HEAVY OIL WESTERN STATIONARY SOURCE
CA**SECTION:** NW18 **TOWNSHIP:** 11N **RANGE:** 23W**INSPECT PROGRAM PARTICIPANT:** NO**EQUIPMENT DESCRIPTION:**

600 BBL WELDED FIXED ROOF CLARIFIER TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-489

CONDITIONS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit
10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-497-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

500 BBL WELDED FIXED ROOF PRODUCED WATER TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM
LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit
10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-498-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

500 BBL WELDED FIXED ROOF SAND DUMP TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit
10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-499-0

EXPIRATION DATE: 05/31/2021

SECTION: 18 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

85 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D3246, D4084, D4468, D6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
9. Emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.00537 lb; VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after are-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted once every twelve (12) months thereafter. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit
22. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. Records of sulfur content (gr S/100 set) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-500-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

10 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO 5.0 ULTRA LOW-NOX MMBTU/HR BURNERS

PERMIT UNIT REQUIREMENTS

1. This equipment is authorized to operate at the following locations: Sec. 18, T11N, R23W and Sec. 25, T31S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Heater treater shall only be fired on produced gas, PUC-quality gas, or PUC-regulated gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit
5. Emissions shall not exceed any of the following limits: NO_x; 9 ppmvd @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.007 lb-PM₁₀/MMBtu, CO; 50 ppmvd @ 3% O₂ or 0.037 lb-CO/MMBtu, or VOC: 5 ppmv @ 3% O₂ as methane or 0.002 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
7. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
8. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
9. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; and fuel h_hv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Permittee shall demonstrate compliance with fuel gas sulfur content at least annually or whenever there is change in fuel gas source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
20. Fuel gas sulfur content shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Permittee shall maintain accurate records of valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts used to satisfy the fuel sulfur content analysis of fuel gas source, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
23. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-501-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

5000 BBL WASH TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit
10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-502-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

WEMCO UNIT SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-489

PERMIT UNIT REQUIREMENTS

1. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6 of Rule 4623. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4323] Federally Enforceable Through Title V Permit
10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-503-0

EXPIRATION DATE: 05/31/2021

SECTION: 25 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

10 MMBTU/HR GAS-FIRED C.E. NATCO M&M HEATER TREATER #3 WITH TWO 5.0 ULTRA LOW-NOX MMBTU/HR BURNERS

PERMIT UNIT REQUIREMENTS

1. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. Heater treater shall only be fired on produced gas, PUC-quality gas, or PUC-regulated gas with a sulfur content not exceeding 1.0 gr S/100 scf. [District Rules 2201] Federally Enforceable Through Title V Permit
3. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts may be used to satisfy the fuel sulfur content analysis, provided they establish the fuel sulfur concentration and higher heating value. [District Rule 4320] Federally Enforceable Through Title V Permit
4. Emissions shall not exceed any of the following limits: NO_x; 9 ppmvd @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.007 lb-PM₁₀/MMBtu, CO; 50 ppmvd @ 3% O₂ or 0.037 lb-CO/MMBtu, or VOC: 5 ppmv @ 3% O₂ as methane or 0.002 lb-VOC/MMBtu. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
7. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
8. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19; CO (ppmv) - EPA Method 10 or ARB Method 100; Stack gas oxygen (O₂) - EPA Method 3 or 3A or ARB Method 100; stack gas velocities - EPA Method 2; Stack gas moisture content - EPA Method 4; and fuel hhv (MMBtu) - ASTM D 1826 or D 1945 in conjunction with ASTM D 3588. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable analyzer that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. If the NO_x or CO concentrations corrected to 3%, as measured by the portable analyzer, exceed the applicable emission limit, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. All NO_x, CO, and O₂ emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The NO_x, CO, and O₂ analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute sample period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of: (1) the date and time of NO_x, CO and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the PTO, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. Permittee shall demonstrate compliance with fuel gas sulfur content at least annually or whenever there is change in fuel gas source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
19. Fuel gas sulfur content shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. Permittee shall maintain accurate records of valid purchase contracts, supplier certifications, tariff sheets, or transportation contracts used to satisfy the fuel sulfur content analysis of fuel gas source, provided they establish the fuel sulfur concentration and higher heating value. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
21. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-504-2

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STRUTHERS STEAM GENERATOR WITH LOW NOX BURNER AND O2 CONTROLLER SERVED BY AIRPOL DUAL VALVE TRAY SOX SCRUBBER WITH CHEVRON TYPE MIST ELIMINATOR AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH S-1372-504 AND '520

PERMIT UNIT REQUIREMENTS

1. While dormant, the operator shall lock out the power, drain the fluids, and blind the fuel lines of the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
10. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 501 and 5.2.3] Federally Enforceable Through Title V Permit
11. Total fuel consumption, including TEOR gas, shall not exceed 511,000 MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule] Federally Enforceable Through Title V Permit
14. Permittee shall install and maintain operational non-resettable, totalizing mass or volumetric flow meter(s) in the fuel (natural gas and TEOR gas) line(s) of the unit. Permittee shall determine the higher heating value (hhv) of the fuels (natural gas and TEOR gas) on a quarterly basis once per calendar quarter and whenever there is a change in the source of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Exhaust from unit shall be directed only to SO₂ scrubber authorized herein except when burning PUC regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Scrubber/wet ESP shall be in operation when combusting TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Emission rate of SO_x from S-1372-504 AND '-520 shall not exceed 262,537 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic, including sodium hydroxide and sodium carbonate. Other caustics may be used upon written District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Scrubber liquor pH shall be maintained at a pH greater than or equal to 6.0 and shall be continuously monitored. [District Rule 2201 and 40 CFR part 64] Federally Enforceable Through Title V Permit
21. Scrubber mist eliminator shall be properly cleaned and maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Scrubber recirculation liquor liquid to gas ratio shall be maintained at no less than 8.0 gpm/1000 acfm. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 2201] Federally Enforceable Through Title V Permit
24. When any unit connected to scrubber is burning TEOR gas, scrubber shall be operating and permittee shall demonstrate compliance with PM₁₀ and sulfur oxide emissions limit by stack source testing within 60 days of initial scrubbing date and annually thereafter unless no TEOR gas has been burned since the last scrubber performance source test. Sulfur removal efficiency of scrubber shall be demonstrated during initial stack source test and calculated with subsequent tests. Ongoing compliance with sulfur oxide emissions limit shall be by calculation using the scrubber liquid pH, the demonstrated sulfur removal efficiency, and the fuel gas sulfur content. Fuel gas sulfur content shall be obtained by sample analysis at least quarterly. [District Rule 2201] Federally Enforceable Through Title V Permit
25. When unit is operated without scrubber/wet ESP, permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content within 60 days of initiating operation without scrubber. Analyses, as approved by the APCO, provided by the gas supplier may be used to satisfy this requirement. [District Rule 2201] Federally Enforceable Through Title V Permit
26. When complying with PM₁₀ and SO_x emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Methods 5 or 201A, 6, 6B, 8, or ARB 100. When operating unscrubbed, a grab sample analysis by double GC performed in the laboratory and EPA Method 19 may be used to calculate SO_x emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every 36 months unless testing is required by scrubber operational mode change as noted above. Annual source testing shall resume if any test fails to show compliance. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. At no time shall amount of TEOR gas introduced to this unit and all units connected to scrubber/wet ESP exceed the amount introduced during a source test demonstrating compliance with permit limits. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Emissions rates shall not exceed any of the following: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x (as SO₂): 0.324 lb/MMBtu, PM₁₀: 0.0713 lb/MMBtu, CO: 42 ppmv @ 3% O₂ or 0.031 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. Source testing to demonstrate compliance with PM₁₀, SO_x, NO_x, and CO emission limits shall be conducted annually, except as provided below. [District Rules 2520, 9.3.2, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
30. Source testing to demonstrate compliance with PM₁₀, SO_x, NO_x, and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. If permittee fails any compliance demonstration for NO_x and/or CO emission limits when testing not less than once every 36 months, compliance with NO_x and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, 4320] Federally Enforceable Through Title V Permit
32. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 2201] Federally Enforceable Through Title V Permit
33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320]
34. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
35. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
36. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
37. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
38. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, sulfur oxides - ARB Methods 1-6, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
39. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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40. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
41. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, 4320] Federally Enforceable Through Title V Permit
42. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
43. Permittee shall maintain records of fuel gas and TEOR gas sulfur content, higher heating value, annual consumption in MMBtu/year. [District Rule 2201] Federally Enforceable Through Title V Permit
44. Permittee shall comply with all notification and recordkeeping requirements of 40 CFR 60.7 a (1)(3) and (b). [District Rule 4001] Federally Enforceable Through Title V Permit
45. Fuel gas sulfur content shall be determined using ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
46. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
47. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
48. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
50. When the scrubber is operating, the scrubber liquor pH shall be recorded every 15 minutes. [40 CFR part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

51. An excursion from the scrubber liquor pH level is defined as a daily pH reading of less than 6. Upon detecting any excursion from the acceptable pH level, the permittee shall investigate the excursion and take corrective action to restore required pH level and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit
52. Records of scrubber pH monitoring equipment downtime, scrubber pH level excursions, and scrubber operation shall be maintained. [40 CFR part 64] Federally Enforceable Through Title V Permit
53. The scrubber pH sensor shall be calibrated annually. Calibration of the pH sensor shall be conducted by comparison of the sensor reading with a laboratory measurement of the scrubber recirculation fluid. [40 CFR part 64] Federally Enforceable Through Title V Permit
54. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit
55. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit
56. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit
57. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
58. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be inspected monthly for detectable leaks. Operator shall repair each leak within 15 calendar days of detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
59. Records of steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork monthly inspections shall be maintained. Inspection log shall contain at a minimum the following: 1) date of inspection; 2) name of inspector; 3) identification and location of leak; and 4) date when leak has been repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
60. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
61. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-505-0

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

12.6 MMBTU/HR NATURAL GAS-FIRED TRICO SUPERIOR MODEL X-4398 HEATER TREATER V-3 WITH TWO 6.3 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Only PUC regulated natural gas shall be used as fuel. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 9 ppmv NO_x (as NO₂) @ 3% O₂, 0.001 lb-SO_x/MMBtu (as SO₂), 0.005 lb-PM₁₀/MMBtu, 113 ppmv CO - @ 3% O₂, or 0.003 lb-VOC/MMBtu (7.1 ppmv @ 3% O₂) (as methane). [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
18. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520] Federally Enforceable Through Title V Permit
24. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201 and 4301] Federally Enforceable Through Title V Permit
25. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. [District Rule 4301] Federally Enforceable Through Title V Permit
26. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [Kern County Rule 407] Federally Enforceable Through Title V Permit
27. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306 and 4320. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
28. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-506-2

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR STRUTHERS NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN LOW NOX BURNER AND FGR AUTHORIZED TO BE OPERATED AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.0085 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 42 ppmvd CO @ 3% O₂ or 0.031 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. This steam generator is approved for operation at the following locations: SE/4 Section 14 and SE/4 Section 15, Township 31 South, Range 22 East, and NE/4 Section 24, Township 26 South, Range 20 East, MDB&M. [District Rule 2201 and CH&SC 41700] Federally Enforceable Through Title V Permit
9. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
10. This steam generator and Unit S-1372-539 shall not be operated at the same permitted location at the same time. [District Rule 2201 and CH&SC 41700] Federally Enforceable Through Title V Permit
11. Flue gas recirculation system shall be operated whenever generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. Records of fuel gas sulfur content analysis shall be kept for a period of five years and made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 2520, 9.3.2, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
25. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
26. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
27. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, and 4305. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
28. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5; 4306, 5.5.5; and 4320] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1; 4306, 6.1; and 4320] Federally Enforceable Through Title V Permit
31. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-507-0

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

10 MMBTU/HR NATURAL GAS-FIRED H.T.I. M&M HEATER TREATER #3 WITH TWO MAXON MODEL XPO EB ULTRA LOW NOX BURNERS OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-1372

PERMIT UNIT REQUIREMENTS

1. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
2. The Heater Treater shall not be operated within 2,500 feet of the nearest business or residence receptor. [District Rule 4102]
3. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
7. The unit shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NO_x @ 3% O₂ or 0.011 lb-NO_x/MMBtu, 0.001 lb-SO_x/MMBtu, 0.005 lb-PM₁₀/MMBtu, 113 ppmvd CO @ 3% O₂ or 0.082 lb-CO/MMBtu, or 0.003 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Source testing to measure NO_x and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit
22. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. Records of fuel gas sulfur content analysis shall be kept for a period of five years and made available for District inspection upon request. [District NSR Rule and Rule 4320] Federally Enforceable Through Title V Permit
23. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rules 4301, 5.2.1 and 4320] Federally Enforceable Through Title V Permit
24. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
25. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
26. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rules 2520, 9.3.2 and 4320, Kern County Rule 407] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
28. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201, and 4301. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
30. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-508-0

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

10 MMBTU/HR NATURAL GAS-FIRED H.T.I. HEATER TREATER #4, SA# 0392 WITH DORMANT BURNERS, FUNCTIONING AS AN EXEMPT FWKO PRESSURE VESSEL WHILE THE BURNERS ARE DORMANT

PERMIT UNIT REQUIREMENTS

1. This unit may be operated as an un-fired free water knockout vessel when it is in dormant status. Conditions 9 through 18 shall not apply while this unit is being operated as an un-fired exempt free water knockout vessel. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The burners from this equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit
3. The burners from this equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rule 4320] Federally Enforceable Through Title V Permit
4. No modifications to this unit shall be performed without an Authority to Construct for such modifications, except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit
5. The fuel supply line shall be physically disconnected from this unit, or an alternate method approved by the APCO shall be instituted to ensure this unit is not operated as a heater treater. [District Rule 4306] Federally Enforceable Through Title V Permit
6. This heater treater/ free water knockout vessel shall only operate at the following specified locations: NE and SE Section 15, Township 31S, Range 22E; and NE Section 24, Township 26S, Range 20E. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
7. A permanently affixed mechanical stop on the positioner shall control the inlet air butterfly valve and the natural gas supply valve such that the natural gas supply is limited to 4,762 scf/hr (equivalent to 5 MMBtu/hr) for each independent burner. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Maximum heat input of each burner shall be less than or equal to 5 million Btu per hour. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Each burner's products of combustion shall not come into contact with the products of combustion of any other burner. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
11. Emissions shall not exceed any of the following limits: 0.095 lb-NO_x/MMBtu (as NO₂) (78 ppmv @ 3% O₂), 0.001 lb-SO_x/MMBtu (6 ppmv H₂S), 0.005 lb-PM₁₀/MMBtu, 0.084 lb-CO/MMBtu (113 ppmv @ 3% O₂), or 0.003 lb-VOC/MMBtu (7 ppmv @ 3% O₂). [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
13. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rule 2201] Federally Enforceable Through Title V Permit
14. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
16. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4201 and 4301. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
18. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
19. Records of fuel gas sulfur content analysis shall be kept for a period of five years and made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-509-0

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

87.7 MMBTU/HR STRUTHERS NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE BURNER, MULTIPLE LOCATIONS - M & M GENERATOR #5

PERMIT UNIT REQUIREMENTS

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rules 4201 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
4. Except as provided below, fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
5. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, double GC for H₂S and mercaptans or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
6. In months where PUC quality gas is combusted in this unit, the permittee shall maintain records on a calendar month basis for demonstration that the percentage by volume of PUC quality gas is less than 50% of the total gas combusted. Combustion of gas with greater than 50% by volume PUC quality gas is a violation of Rule 4320 and this permit. [District Rule 4320] Federally Enforceable Through Title V Permit
7. Permittee shall install and maintain operational non-resettable, totalizing mass or volumetric flow meter(s) in the fuel (natural gas and TEOR gas) line(s) of the unit. Permittee shall determine the higher heating value (hhv) of the fuels (natural gas and TEOR gas) on a quarterly basis once per calendar quarter and whenever there is a change in the source of the TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emissions rates shall not exceed any of the following limits: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x: 0.00285 lb/MMBtu, PM₁₀: 0.005 lb/MMBtu, CO: 25 ppmv @ 3% O₂ or 0.0185 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit
23. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rules 2520, 9.3.2 and 4320, 5.7.6.1] Federally Enforceable Through Title V Permit
24. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89 for gaseous fuels. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2 and Kern County Rule 407] Federally Enforceable Through Title V Permit
27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
30. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-510-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

42,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK WITH VAPOR RECOVERY SYSTEM

PERMIT UNIT REQUIREMENTS

1. The tank shall be fully enclosed and shall be maintained in a leak-free condition. The vapor recovery system shall consist of a closed system that collects all VOCs from the storage tank, and a VOC control device. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
3. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
5. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times.
[District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-511-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

10,500 GALLON FIXED ROOF PETROLEUM STORAGE TANK WITH VAPOR RECOVERY SYSTEM

PERMIT UNIT REQUIREMENTS

1. The tank shall be fully enclosed and shall be maintained in a leak-free condition. The vapor recovery system shall consist of a closed system that collects all VOCs from the storage tank, and a VOC control device. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
3. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
5. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times.
[District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-512-0

EXPIRATION DATE: 05/31/2021

SECTION: 14 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

7,560 GALLON FIXED ROOF PETROLEUM STORAGE TANK WITH VAPOR RECOVERY SYSTEM

PERMIT UNIT REQUIREMENTS

1. The tank shall be fully enclosed and shall be maintained in a leak-free condition. The vapor recovery system shall consist of a closed system that collects all VOCs from the storage tank, and a VOC control device. The VOC control device shall reduce the inlet VOC emissions by at least 95 percent by weight. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit
2. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
3. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
4. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
5. The control efficiency shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times.
[District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-513-0

EXPIRATION DATE: 05/31/2021

SECTION: NE24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

500 BBL WASH TANK #10754 WITH VAPOR RECOVERY PIPING SHARED WITH PERMITS S-1372-514, '-515, '-516, '-518, '-531, '-537, '-538, '-540, '-546, AND '-554 (SECURITY LEASE)

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall be maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Tank seams, welds, joints, piping, valves and fittings shall be inspected and maintained leak-free. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The vapor recovery system shall be maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
5. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
7. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total organic compound content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using U.S. EPA document "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The vapor control device shall reduce the inlet VOC emissions by at least 99% by weight. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported [District Rule 4623] Federally Enforceable Through Title V Permit
12. Vapor control system compressor shall activate before tanks' internal pressure exceeds any pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Vapor space pressure in tanks shall be controlled by a gas blanketing system. [District Rule 2201] Federally Enforceable Through Title V Permit
14. PUC-quality, PUC-regulated, inert gas, produced gas or equivalent shall be used as blanketing gas. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Blanket gas pressure control valves shall be set to minimize tanks in-breathing and prevent tanks pressure relief valves from opening. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Collected vapors shall be discharged only to sales gas compressor listed on S-1114-103, flare S-1114-73 or boiler S-1114-124. [District Rule 2201] Federally Enforceable Through Title V Permit
17. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
18. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed any tank's pressure relief valve setting. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623] Federally Enforceable Through Title V Permit
22. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
24. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623] Federally Enforceable Through Title V Permit
25. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623] Federally Enforceable Through Title V Permit
26. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

27. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070]
28. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
30. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-514-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

21,000 GALLON FIXED ROOF SHIPPING TANK #10814 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
4. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total hydrocarbon content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
17. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-515-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

21,000 GALLON FIXED ROOF WASH TANK #10815 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMITS-1372-513

PERMIT UNIT REQUIREMENTS

1. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
4. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total hydrocarbon content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
17. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-516-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

42,000 GALLON FIXED ROOF SHIPPING TANK # 10824 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
4. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total hydrocarbon content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
17. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-517-0

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

THERMALLY ENHANCED OIL RECOVERY OPERATION WELL VENT VAPOR CONTROL SYSTEM SERVING 711 STEAM-ENHANCED CRUDE OIL PRODUCTION WELLS

PERMIT UNIT REQUIREMENTS

1. The total number of steam drive wells included in this unit may be up to 85 wells. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall maintain with the permit a current listing of all wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1081] Federally Enforceable Through Title V Permit
3. Non-condensable vapors shall either be incinerated in scrubbed steam generator S-1372-504, '-520 and/or '-536 or shall be disposed of in a well approved by the Division of Oil Gas and Geothermal Resources (D.O.G.G.E.R) for the disposal of well vent vapor recovery system gases. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Volatile Organic Compound (VOC) emission rate shall not exceed 247.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Collected liquids shall be handled, stored, and disposed of in a manner preventing air contaminant emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
6. When steam generator is used for waste gas disposal permittee shall maintain daily records of waste gas volume and quarterly records of waste gas sulfur content [District Rule 1081] Federally Enforceable Through Title V Permit
7. Components associated with the steam enhanced crude oil production wells and the vapor recovery systems shall be inspected on a quarterly basis, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. [District Rules 2201, 2520, 9.3.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed in compliance with District Rule 1081 (Amended December 16, 1993). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. The well vent vapor control system listed on this permit may receive vapors from other Chevron USA Inc's TEOR system listed on PTO S-1141-250 and from Sentinel Peak Resources TEOR systems listed on PTOs S-1372-74, '76, '77 and '387. [District Rule 2201] Federally Enforceable Through Title V Permit
10. For pressure relief devices (PRDs) a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 400 to 10,000 ppmv. For components other than PRDs a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 2,000 to 10,000 ppmv. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401 3.20] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1] Federally Enforceable Through Title V Permit
12. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere., a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401 5.2] Federally Enforceable Through Title V Permit
13. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401 5.2.2] Federally Enforceable Through Title V Permit
14. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401 5.3.1] Federally Enforceable Through Title V Permit
15. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401 5.3.2] Federally Enforceable Through Title V Permit
16. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401 5.3.3] Federally Enforceable Through Title V Permit
17. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401 5.4.1] Federally Enforceable Through Title V Permit
18. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401 5.4.2] Federally Enforceable Through Title V Permit
19. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401 5.4.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. In addition to the inspections required by Sections 5.4.1, Section 5.4.2 and Section 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401 5.4.4] Federally Enforceable Through Title V Permit
21. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401 5.4.7] Federally Enforceable Through Title V Permit
22. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401 5.4.8] Federally Enforceable Through Title V Permit
23. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401 5.5.1] Federally Enforceable Through Title V Permit
24. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and 5.5.2.3 of Rule 4401, or the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit
25. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401 5.5.3] Federally Enforceable Through Title V Permit
26. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401 5.5.4] Federally Enforceable Through Title V Permit
27. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401 5.5.4] Federally Enforceable Through Title V Permit
28. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401 5.5.5] Federally Enforceable Through Title V Permit
29. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401 5.5.6] Federally Enforceable Through Title V Permit
30. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401 5.5.7] Federally Enforceable Through Title V Permit
31. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401 6.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401 6.1.3] Federally Enforceable Through Title V Permit
33. Operator shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401 6.1.4] Federally Enforceable Through Title V Permit
34. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401 6.1.5] Federally Enforceable Through Title V Permit
35. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401 6.1.6] Federally Enforceable Through Title V Permit
36. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401 6.1.7] Federally Enforceable Through Title V Permit
37. Operator shall submit a list of all gauge tanks, as defined in Section 3.0. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401 6.1.8] Federally Enforceable Through Title V Permit
38. The results of gauge tank TVP testing conducted pursuant to Section 6.2.5 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401 6.1.9] Federally Enforceable Through Title V Permit
39. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401 6.1.10] Federally Enforceable Through Title V Permit
40. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit
41. If approved by the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine, in a smokeless flare or injected into DOGGR-approved gas injection wells. [District Rule 4401 6.2.2] Federally Enforceable Through Title V Permit
42. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0 of Rule 4401: an operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401 6.2.3] Federally Enforceable Through Title V Permit
43. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401 6.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

44. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401 6.3.2] Federally Enforceable Through Title V Permit
45. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401 6.3.3] Federally Enforceable Through Title V Permit
46. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401 6.3.4] Federally Enforceable Through Title V Permit
47. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401 6.4] Federally Enforceable Through Title V Permit
48. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
49. The operator shall maintain an APCO approved Operator Management Plan (OMP). The OMP shall include, at a minimum, a description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt; an identification and description of any known hazard that might affect the safety of an inspector; except for pipes, the number of components that are subject to this rule by component type; except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation; except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description); except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.6 shall be submitted with the OMP. A detailed schedule of an operator's inspections of components to be conducted by a qualified contractor or by an in-house team; a description of the training standards for personnel that inspect and repair components; and a description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
50. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

51. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 4401, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-518-0

EXPIRATION DATE: 05/31/2021

SECTION: NE24 **TOWNSHIP:** 26 **RANGE:** 20

EQUIPMENT DESCRIPTION:

1,000 BARREL FIXED-ROOF CRUDE OIL STORAGE TANK VENTING TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
4. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total hydrocarbon content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
17. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-519-0

EXPIRATION DATE: 05/31/2021

SECTION: NE24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

20 MMBTU/HR FLARE, 3 IN DIA X 12 FT TALL, WITH REDUCED WASTE GAS FLOW TO NO MORE THAN 4.9 MMBTU/HR, SERVING PRIMARY PRODUCTION WELL VENT VAPOR CONTROL SYSTEM, TANK BATTERY '-513 VAPOR CONTROL SYSTEM, & TEOR WELL VENT VAPOR CONTROL SYSTEM '-530 (STAR LEASE)

PERMIT UNIT REQUIREMENTS

1. Capacity of flare shall not exceed 4.9 MMBtu/hr. [District Rules 2201 and 4311]
2. Except for the pilot, each gas inlet to flare shall be equipped with recording flow rate meter. [District Rules 2201 and 4311]
3. Operator shall demonstrate the heat input capacity of the flare daily by calculation, using the metered volume of the gas delivered to the flare and the most current measured heating value of the gas stream. Except for the pilot, heating value for the gas stream shall be determined at least once every six months by sample analysis. [District Rule 2201 and 4311]
4. Emission rates shall not exceed the following: PM₁₀: 0.0202 lb/MMBtu, NO_x (as NO₂): 0.068 lb/MMBtu, VOC: 0.0210 lb/MMBtu, and CO: 0.37 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Sulfur content of gases burned in flare shall not exceed 303.7 gr/100 Scf as total sulfur. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Gas sulfur content and higher heating value shall be measured quarterly using gas chromatographic analysis to calculate SO_x emission rate. Test reports of measured fuel sulfur content and higher heating value shall be maintained. The calculated SO_x emission rate shall be recorded in format approved by the District. If compliance with the SO_x emission rate has been demonstrated for 8 consecutive quarters for a fuel source, then the testing frequency shall be annually. If an annual fuel sulfur content and higher heating value testing fails to show compliance, quarterly testing shall resume [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. The permittee shall keep accurate daily records of volume of gas flared for a period of five years, and shall make such records available for District inspection upon request. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. Flares shall be designed for and operated with no visible emissions except for periods not to exceed a total of three (3) minutes in any one (1) hour. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit
9. The flare shall be inspected quarterly during operation for visible emissions, using EPA Method 22. If visible emissions are observed, corrective action shall be taken. If visible emissions cannot be eliminated, an EPA Method 9 test shall be conducted within 24 hours. [2520, 9.3.2] Federally Enforceable Through Title V Permit
10. The flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit
11. The outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Except for flares equipped with a flow-sensing ignition system, a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device, capable of continuously detecting at least one pilot flame or the flare flame is present shall be installed and operated. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit
13. Flares that use flow-sensing automatic ignition systems and which do not use a continuous flame pilot shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit
14. The requirements of SJVAPCD District Rule 4101 (Amended November 15, 2001) are addressed in a previous permit condition. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
15. The requirements of SJVAPCD District Rule 4311 (as amended June 18, 2009) are addressed in this permit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
16. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-520-0

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

62.5 MMBTU/HR NATURAL/TEOR GAS FIRED STEAM GENERATOR (CUSA ID # 50-1-15A, DIS# 43005-78) WITH FLUE GAS RECIRCULATION, O2 CONTROLLER AND SO2 SCRUBBER AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH UNIT S-1372-504

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
2. Steam generator is authorized to operate at the following locations: SE Section 14, T31S, R22E; SE and NE Section 15, T31S, R22E; NE Section 24, T26S, R20E; Sections 18, 19, and 20, T11N, R 23W. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made in writing no later than 48 hours after starting operation at the location. [District Rule 1070 and Kern County Rule 107] Federally Enforceable Through Title V Permit
4. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
5. When operating at NE15, T31S/R22E, scrubber shall be used when burning TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
7. Fuel H₂S, total sulfur, and methane content shall be determined semi-annually and whenever the fuel is switched from PUC-quality to non PUC-quality natural gas and from non PUC-quality to PUC-quality natural gas, using the following test methods H₂S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
8. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emission rates of SO_x for units S-1372-504 and -520 shall not exceed 262,537 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Except as set for below, emissions rates shall not exceed any of the following: NO_x (as NO₂): 9 ppmv @ 3% O₂ or 0.011 lb/MMBtu, SO_x (as SO₂): 0.324 lb/MMBtu, PM₁₀: 0.0713 lb/MMBtu, CO: 29 ppmv @ 3% O₂ or 0.021 lb/MMBtu, or VOC: 0.003 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. When fired on PUC-quality natural gas, the NO_x emissions rate shall not exceed (as NO₂): 7 ppmv @ 3% O₂ or 0.008 lb/MMBtu. [District Rule 4320] Federally Enforceable Through Title V Permit
12. At no time shall TEOR gas introduced to this unit and all units connected to scrubber exceed the amount introduced during a source test demonstrating compliance with permit limits. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months, or whenever the fuel is switched from PUC-quality to non PUC-quality natural gas or from non PUC-quality to PUC-quality natural gas; or whenever the FGR is switched to, or from, open to closed. After demonstrating compliance, in an operating mode, on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 2201] Federally Enforceable Through Title V Permit
15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, sulfur oxides - ARB Methods 1-6, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
21. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
22. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Permittee shall maintain records of fuel gas and TEOR gas sulfur contents and annual consumption of each. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be inspected monthly for detectable leaks. Operator shall repair each leak within 15 calendar days of detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
27. Records of steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork monthly inspections shall be maintained. Inspection log shall contain at a minimum the following: 1) date of inspection; 2) name of inspector; 3) identification and location of leak; and 4) date when leak has been repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
28. Fuel gas sulfur content shall be determined using ASTM D3246 or double GC for H₂S and mercaptans. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. [District Rule 4301] Federally Enforceable Through Title V Permit
30. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. [Kern County Rule 407] Federally Enforceable Through Title V Permit
31. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305, 4306, and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. Scrubber/wet ESP control efficiency shall not be less than 95% by weight sulfur compounds. [District Rule 4320] Federally Enforceable Through Title V Permit
34. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic, including sodium hydroxide and sodium carbonate. Other caustics may be used upon written District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
35. When the scrubber is operating, scrubber liquor shall be maintained at a pH greater than or equal to 6.0 and shall be continuously monitored. [40 CFR part 64] Federally Enforceable Through Title V Permit
36. When the scrubber is operating, the scrubber liquor pH shall be recorded every 15 minutes. [40 CFR part 64] Federally Enforceable Through Title V Permit
37. An excursion from the scrubber liquor pH level is defined as a daily pH reading of less than 6. Upon detecting any excursion from the acceptable pH level, the permittee shall investigate the excursion and take corrective action to restore required pH level and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

38. Records of scrubber pH monitoring equipment downtime, scrubber pH level excursions, and scrubber operation shall be maintained. [40 CFR part 64] Federally Enforceable Through Title V Permit
39. The scrubber pH sensor shall be calibrated annually. Calibration of the pH sensor shall be conducted by comparison of the sensor reading with a laboratory measurement of the scrubber recirculation fluid. [40 CFR part 64] Federally Enforceable Through Title V Permit
40. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit
41. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit
42. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit
43. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
44. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
45. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
46. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-521-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

5,000 BBL FIXED ROOF FREE WATER KNOCKOUT TANK T-1 W/VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER, LIQUID KNOCKOUT VESSELS, & VAPOR COMPRESSOR WITH PIPING TO STEAM GENERATOR S-1372-520, HEATER TREATERS S-1372-525 AND '-526, AND SERVING TANKS S-1372-521, '-522, '-523, '-524, '-527, '-528, '-529, '-533, '-534, AND '-535, AND WEMCO S-1372-549 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-522-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

2,000 BBL LACT TANK #T-2 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-523-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL SLOP TANK #T-4 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-524-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL WASTEWATER TANK #T-5 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-525-0

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

12.3 MMBTU/HR NATURAL GAS-FIRED NATCO MODEL VFH-RM, SERIAL NO. ELIN22901-01 HEATER TREATER V-1 WITH TWO 6.15 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS WITH VAPOR RECOVERY PIPING TO S-1372-521

PERMIT UNIT REQUIREMENTS

1. Only natural gas with a maximum sulfur content of 0.2 grain/100 scf shall be used as fuel or make up gas. [District Rule 2201 & 4320] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed any of the following limits: 9 ppmv-NOx @ 3% O2, 0.005 lb-PM10/MMBtu, 250 ppmv CO @ 3% O2, or 0.003 lb-VOC/MMBtu (7.1 ppmv @ 3% O2) (as methane). [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
3. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
4. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
5. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
6. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

7. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
8. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted every twelve (12) months. After demonstrating compliance on two (2) consecutive source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
18. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
19. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
20. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 4305, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
23. Permittee shall maintain records of fuel gas sulfur content analysis and annual fuel use. [District Rule 2201] Federally Enforceable Through Title V Permit
24. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 1070]
25. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305 and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
26. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
27. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

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San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-526-0

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

12.3 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER V-2 WITH TWO 6.15 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS WITH VAPOR RECOVERY PIPING TO S-1372-521

PERMIT UNIT REQUIREMENTS

1. Only natural gas with a maximum sulfur content of 0.2 grain/100 scf shall be used as fuel or make up gas. [District Rules 2201 & 4320] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed any of the following limits: 9 ppmv-NO_x @ 3% O₂, 0.005 lb-PM₁₀/MMBtu, 250 ppmv CO @ 3% O₂, or 0.003 lb-VOC/MMBtu (7.1 ppmv @ 3% O₂) (as methane). [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
3. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
4. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
5. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
6. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

7. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
8. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted every twelve (12) months. After demonstrating compliance on two (2) consecutive source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
18. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
19. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rule 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit
20. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 4305, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

22. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
23. Permittee shall maintain records of fuel gas sulfur content analysis and annual fuel use. [District Rule 2201] Federally Enforceable Through Title V Permit
24. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rule 1070]
25. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, 4305 and 4320. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
26. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
27. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-527-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

WEMCO AIR FLOTATION UNIT #W-1 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-528-0

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL SUMP REPLACEMENT TANK #T-9 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521
(MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-529-0

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,000 BBL SUMP REPLACEMENT TANK #T-10 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

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San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-530-0

EXPIRATION DATE: 05/31/2021

SECTION: NE24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

20 STEAM ENHANCED CRUDE OIL PRODUCTION WELLS, AND THERMALLY ENHANCED OIL RECOVERY OPERATION AND WELL-VENT VAPOR CONTROL SYSTEM INCLUDING SEPARATORS, COLLECTORS, COOLERS, AND COMPRESSORS

PERMIT UNIT REQUIREMENTS

1. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit
2. VOC content of well vent vapor gas shall not exceed 10% by weight. If the VOC content of the well vent vapor gas is less than 10% by weight for 8 consecutive quarterly samplings per District approved plan, sampling frequency shall only be required annually. Permittee shall conduct quarterly gas sampling immediately downstream of the initial compressor. If gas samples are 10% VOC by weight or less for 8 consecutive quarterly samplings, sampling shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Collected vapors shall be sent to the sales gas line, incinerated in flare S-1372-519, or injected into the formation. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Injection of collected vapors shall only be performed using Department of Oil, Gas & Geothermal (DOGGR) approved injection wells. Permittee shall make copies of DOGGR approval for injection wells and make such documentation readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Permittee shall cease injecting vapors and notify the District immediately if DOGGR injection approval is revoked, denied, terminated, surrendered or altered to disallow injection. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Permittee shall inspect all components on a quarterly basis for leaks, using the inspection procedures contained in Rule 4401. Any component found to be leaking shall be reinspected within 30 days after it is repaired. [District NSR Rule] Federally Enforceable Through Title V Permit
8. Permittee shall maintain with the permit a listing (updated annually within 60 days of permit anniversary) of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Compliance with permit conditions in the Title V permit shall be deemed in compliance with District Rule 1081(as amended December 16, 1993). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. For pressure relief devices (PRDs) a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 400 to 10,000 ppmv. For components other than PRDs a major gas leak is greater than 10,000 ppmv and a minor gas leak is from 2,000 to 10,000 ppmv. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak, except seal lubricant, that is not a major liquid leak and drips liquid at a rate of more than three drops per minute. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
11. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit
12. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1] Federally Enforceable Through Title V Permit
13. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere., a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.2] Federally Enforceable Through Title V Permit
14. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
15. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.5 of Rule 4401. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
16. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
17. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401, 5.3.3] Federally Enforceable Through Title V Permit
18. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.4.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
20. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and 5.5.2.3 of Rule 4401, or the component is found to be in compliance with the requirements of this rule. [District Rule 4401, 5.5.2] Federally Enforceable Through Title V Permit
21. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
22. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
23. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
24. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
25. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.6] Federally Enforceable Through Title V Permit
26. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit
27. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit
28. Operator shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401, 6.1.4] Federally Enforceable Through Title V Permit
29. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit
30. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit
31. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401, 6.1.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. Operator shall submit a list of all gauge tanks, as defined in Section 3.0. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401, 6.1.8] Federally Enforceable Through Title V Permit
33. The results of gauge tank TVP testing conducted pursuant to Section 6.2.5 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401, 6.1.9] Federally Enforceable Through Title V Permit
34. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.10] Federally Enforceable Through Title V Permit
35. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0 of Rule 4401: an operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit
36. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
37. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
38. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
39. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

40. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
41. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
42. The operator shall maintain an APCO approved Operator Management Plan (OMP). The OMP shall include, at a minimum, a description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt; an identification and description of any known hazard that might affect the safety of an inspector; except for pipes, the number of components that are subject to this rule by component type; except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation; except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description); except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description The results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.6 shall be submitted with the OMP. A detailed schedule of an operator's inspections of components to be conducted by a qualified contractor or by an in-house team; a description of the training standards for personnel that inspect and repair components; and a description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
43. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. [District Rule 4401, 6.5] Federally Enforceable Through Title V Permit
44. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, and 4401, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-531-0

EXPIRATION DATE: 05/31/2021

SECTION: NE 24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

3,300 BARREL LACT TANK WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Vapor control efficiency shall be maintained at no less than 99%. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Tank gauging, sampling devices, relief valves, manholes, vapor recovery system components, etc. shall be leak free (as defined in Rule 4623) and shall remain closed at all times except during gauging or sampling. [District NSR Rule and 4623] Federally Enforceable Through Title V Permit
4. Tank seams, welds, joints, piping, valves and fittings shall be inspected and maintained leak free (as defined in Rule 4623). [District NSR Rule and 4623] Federally Enforceable Through Title V Permit
5. A leak free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
6. All piping, fittings, and valves shall be inspected annually in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
10. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using U.S. EPA publication 453/R-95-17, Table 2-4. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit
12. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-533-0

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-534-0

EXPIRATION DATE: 05/31/2021

SECTION: NE 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-535-0

EXPIRATION DATE: 05/31/2021

SECTION: NE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521

PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 4623] Federally Enforceable Through Title V Permit
2. Tank shall vent only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 99%. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Tank vapors shall be disposed of only by injection in DOGGR approved gas disposal well(s). [District Rule 4623] Federally Enforceable Through Title V Permit
4. Permittee shall submit copies of DOGGR approval of gas disposal well(s) prior to injection. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
6. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
7. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
8. The control efficiency of any VOC destruction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25A provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4623, 6.4.6] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired. Leaks over 10,000 ppmv shall be reported as a deviation. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 4623 (Amended December 20, 2001). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
13. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-536-0

EXPIRATION DATE: 05/31/2021

SECTION: SE15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

77.6 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER

PERMIT UNIT REQUIREMENTS

1. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. The equipment shall not be located within 1,000 feet of any K-12 school nor 1,000 feet of any residence or business. [District Rule 4102]
3. The operator shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1081] Federally Enforceable Through Title V Permit
4. Permittee shall determine the higher heating value (hhv) of the fuel at least once per year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Emissions rates shall not exceed any of the following: NO_x (as NO₂): 7 ppmv @ 3% O₂ or 0.008 lb/MMBtu, SO_x (as SO₂) 0.00285 lb/MMBtu, PM₁₀: 0.0076 lb/MMBtu, CO: 42 ppmv @ 3% O₂ or 0.031 lb/MMBtu, or VOC: 0.0055 lb/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
7. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
8. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
9. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
10. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NO_x and CO source testing requirement. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
12. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
15. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
16. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
17. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
20. Permittee shall maintain records of fuel gas sulfur content and higher heating value. [District Rule 2201] Federally Enforceable Through Title V Permit
21. All records required to be maintained by this permit shall be maintained for a period of five (5) years and shall be made readily available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-537-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

500 BBL FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
4. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total hydrocarbon content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
17. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-538-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1000 BBL FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513

PERMIT UNIT REQUIREMENTS

1. All piping, valves, and fittings shall be constructed and maintained in a gas-tight condition. [District Rule 4623] Federally Enforceable Through Title V Permit
2. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
4. VOC fugitive emissions from the components in gas service on tank shall not exceed 1.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain accurate component count for tank according to EPAs "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total hydrocarbon content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. [District Rule 2201 and 4623] Federally Enforceable Through Title V Permit
10. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit
13. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rule 4623 (Amended December 20, 2001). A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
14. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-539-2

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A NORTH AMERICAN LOW-NOX LEL BURNER
AUTHORIZED TO BE OPERATED AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
7. The exhaust stacks shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
8. The equipment shall not be located within 1,000 feet of any K-12 school nor 1,000 feet of any residence or business. [District Rule 4102]
9. The operator shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1081] Federally Enforceable Through Title V Permit
10. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.0085 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 42 ppmvd CO @ 3% O₂ or 0.031 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305,, 4306, and 4320] Federally Enforceable Through Title V Permit
11. This steam generator and Unit S-1372-50 shall not be operated at the same permitted location at the same time. [District Rule 2201 and CH&SC 41700] Federally Enforceable Through Title V Permit
12. Flue gas recirculation system shall be operated whenever generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
14. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
16. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 4306, and 4320] Federally Enforceable Through Title V Permit
20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. Records of fuel gas sulfur content analysis shall be kept for a period of five years and made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

24. The following test methods shall be used: NO_x (ppmv) - EPA Method 7E or ARB Method 100, NO_x (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H₂S and mercaptans. [District Rules 2520, 9.3.2, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
25. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
26. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
27. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
28. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 1070, 1081, 4201, 4301, and 4305. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Kern County Rules 107, and 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
32. Pursuant to Rule 4320, beginning January 1, 2025 the operator shall pay an annual emission fee to the District for NO_x emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO_x emission limit listed in the December 17, 2020 version of Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-540-0

EXPIRATION DATE: 05/31/2021

SECTION: NE24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

107 BBL WEMCO MODEL 66 DEPURATOR WITH VAPOR PIPING TO SHARED VAPOR RECOVERY SYSTEM LISTED ON TANK PERMIT S-1372-513 (SECURITY LEASE)

PERMIT UNIT REQUIREMENTS

1. The vapor space of the Wemco unit shall be connected to the vapor recovery system listed on S-1114-54 by a system that is constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This Wemco unit shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
3. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
4. Fugitive VOC emissions from the Wemco unit shall not exceed 0.3 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total organic compound content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Permittee shall maintain with the permit an accurate fugitive component count and the resulting emissions calculated pursuant to EPA document, "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-541-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

85 MMBTU/HR PCL NATURAL GAS AND WASTE GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION AUTHORIZED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. This unit shall be equipped with horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input. [Public Resources Code 21000-21177: California Environmental Quality Act]
2. This unit shall be equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump. [Public Resources Code 21000-21177: California Environmental Quality Act]
3. Steam generator shall be equipped with operational fuel gas and waste gas volumetric flow meters . [District Rule 2201] Federally Enforceable Through Title V Permit
4. Only natural gas, or a combination of natural gas and waste gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
10. Emissions shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.0085 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 42 ppmvd CO @ 3% O₂ or 0.031 lb-CO/MMBtu, or 0.00537 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. This steam generator is approved for operation at the following locations: NE/4 Section 18, NE/4 Section 19 and NW/4 Section 20, Township 11 North, Range 23 West; NE/4 Section 15, Township 31 South, Range 22 East; and NE/4 Section 24, Township 26 South, Range 20 East, MDB&M. [District Rule 4201] Federally Enforceable Through Title V Permit
12. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit
13. Flue gas recirculation system shall be operated whenever generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
29. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
30. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period. To demonstrate compliance with this requirement the operator shall test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels. [District Rule 2520, 9.3.2, Kern County Rule 407] Federally Enforceable Through Title V Permit
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
32. Permittee shall maintain a record of the duration of each startup and shutdown of this unit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
33. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
34. Documentation showing that this unit is equipped with a horizontal convection section with at least 235 square feet of bare tube surface area (or thermodynamically equivalent number of square feet of finned tube) per MMBtu/hr of heat input and equipped with variable frequency drive high efficiency electrical motors driving the blower and water pump shall be retained on site. [Public Resources Code 21000-21177: California Environmental Quality Act]
35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-542-0

EXPIRATION DATE: 05/31/2021

SECTION: NE 24 **TOWNSHIP:** 24S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

3.0 MMBTU/HR LEASE GAS-FIRED PROCESS HEATER/BOILER WITH ECLIPSE WINNOX WX0300 LOW NOX
BURNER - STAR SECURITY LEASE

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
2. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO₂. Compliance with this requirement may be demonstrated by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
4. The owner/operator shall monitor, at least once a month, the operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit
5. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. [District Rule 4307] Federally Enforceable Through Title V Permit
6. In lieu of tuning the unit twice each calendar year, the owner/operator shall monitor the emissions with a portable NO_x analyzer at least twice each calendar year and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit
7. This unit shall be fired only on gas with a sulfur content not exceeding 5 grains/100 dscf, or 80 ppmv. [District Rules 2201 and 4307] Federally Enforceable Through Title V Permit
8. Except for periods of startup and shutdown, emissions shall not exceed any of the following limits: NO_x: 30 ppmvd @ 3% O₂ or 0.036 lb-NO_x/MMBtu; 0.0076 lb-PM₁₀/MMBtu; CO: 400 ppmv @ 3% O₂ or 0.296 lb-CO/MMBtu; VOC: 13 ppmv (as methane) @ 3% O₂ or 0.0055 lb-VOC/MMBtu. [District Rules 2201 and 4307] Federally Enforceable Through Title V Permit
9. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rule 4307] Federally Enforceable Through Title V Permit
11. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4307] Federally Enforceable Through Title V Permit
12. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4307] Federally Enforceable Through Title V Permit
13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 4307] Federally Enforceable Through Title V Permit
14. The owner/operator shall maintain records to verify that the required monitoring of the operational characteristics, and tune-ups or portable NO_x analyzing has been performed. [District Rule 4307] Federally Enforceable Through Title V Permit
15. Tune-up records shall include: 1) date of tune-up, 2) name of technician performing tune-up, and 3) reason that they are qualified. [District Rule 4307] Federally Enforceable Through Title V Permit
16. Portable analyzer records shall include: 1) date of emissions analyzing, 2) results of emissions analyzing, 3) name of technician performing analyzing, 4) make and model of analyzer, 5) date of last calibration of the analyzer, and 6) a description of any adjustments made to the unit's operating parameters for the purposes of assuring compliance. [District Rule 4307] Federally Enforceable Through Title V Permit
17. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 4307] Federally Enforceable Through Title V Permit
18. Permittee shall demonstrate compliance with the sulfur oxide emissions limit by analysis of the fuel gas sulfur content at least annually. [District Rules 2201 and 4307] Federally Enforceable Through Title V Permit
19. If compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D1072, D3031, D4084, D3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-543-0

EXPIRATION DATE: 05/31/2021

SECTION: NW19 **TOWNSHIP:** 11N **RANGE:** 23W

EQUIPMENT DESCRIPTION:

85 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. The steam generator shall be operated at one of the following locations within Seneca Resource's Heavy Oil Western Stationary Source: SE/4 Section 25, T31S, R22E; NW/4 and NE/4 Section 19, T11N, R23W. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
3. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
6. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
9. Emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0062 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.00537 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit
22. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-544-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK #T-3 CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-545-0

EXPIRATION DATE: 05/31/2021

SECTION: NE17 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM

PERMIT UNIT REQUIREMENTS

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
2. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of fuel combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. The sulfur content of any fuel, or fuels combined, shall not exceed 1 grains of total sulfur (as H₂S) per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
5. If the unit is fired on noncertified gaseous fuel and compliance with SO_x emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by GC-FPD/TCD or double GC performed in the laboratory. [District Rule 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested monthly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 6 consecutive months for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, monthly testing shall resume. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2201, 2520, and 4320] Federally Enforceable Through Title V Permit
8. Emissions shall not exceed any of the following limits: 5 ppmvd NO_x @ 3% O₂ or 0.0061 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 25 ppmvd CO @ 3% O₂ or 0.0185 lb-CO/MMBtu, or 0.0054 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
9. Flue gas recirculation system shall be operated whenever steam generator is operated. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. If either the NO_x or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
16. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. When the unit changes fuel source, the unit shall undergo source testing to measure NO_x and CO emissions within 60 days of the change unless the unit has already undergone source testing in the last twelve (12) months or thirty-six (36) months after demonstrating compliance on the previous two (2) source tests when fired on that fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit
21. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
22. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
23. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
25. Permittee shall submit notification to the District of the date of construction, anticipated startup, and actual startup. Notifications shall be postmarked no later than 30 days after construction and 15 days after actual startup. The notifications shall include the design heat input and identification of fuels for this permit unit. [40 CFR 60.48c (a)] Federally Enforceable Through Title V Permit
26. Permittee shall maintain daily records of the type and quantity of fuel combusted by the steam generator. [District Rule 2201 and 40 CFR 60.48c (g)] Federally Enforceable Through Title V Permit
27. Records of sulfur content (gr S/100 scf) of combusted gas shall be maintained. [District Rules 1070, 2201, and 4320] Federally Enforceable Through Title V Permit
28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, 4320, and 40 CFR 60.48c (i)] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-546-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

3,300 BBL FIXED ROOF CRUDE OIL LACT TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON TANK S-1372-521

PERMIT UNIT REQUIREMENTS

1. This tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall be maintained in a leak-free condition. [District Rule 4623, 5.1.3] Federally Enforceable Through Title V Permit
3. Tank seams, welds, joints, piping, valves and fittings shall be inspected and maintained leak-free. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
5. VOC emissions from fugitive emissions sources in this permit unit shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC content of the tank vapor space and tank vapor control system gas shall not exceed 68% of the total organic compound content by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using U.S. EPA document "EPA Protocol for Equipment Leak Emission Estimate," Table 2-4, "Oil and Gas Production Operations," using average emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

12. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
14. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
15. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
16. Any component found to be leaking on two consecutive annual inspections is in violation of this rule, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
17. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070]
18. A leak-free condition is defined as a condition without a gas leak or liquid leak. A gas leak is defined as a reading in excess of 10,000 parts per million by volume (ppmv), as methane, above background on a portable hydrocarbon detection instrument that is calibrated with methane in accordance with US EPA Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.17] Federally Enforceable Through Title V Permit
19. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
20. The permittee shall keep accurate records of the dates of inspection and monitoring and the components inspected and monitored. [District Rule 2201]
21. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623]

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-547-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

750 BBL FIXED ROOF HOT PRODUCED WATER TANK T-8 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-521

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Upon detection of a liquid leak, with a leak rate of greater than or equal to 30 drops per minute, permittee shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, permittee shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking fluids (liquids or gases) shall be immediately affixed with a tag showing the component to be leaking. Permittee shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
11. Leaking components that have been discovered by the permittee that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3, shall not constitute a violation of this rule. Leaking components, as defined by District Rule 4623, discovered by District staff that were not previously identified and/or tagged by the permittee, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3, shall constitute a violation of this rule. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
12. Tank Inspection and Maintenance Condition: If a component type for a given tank is found to leak during an annual inspection, permittee shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components of that component type are found to leak after four consecutive quarters, the permittee may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
13. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-548-0

EXPIRATION DATE: 05/31/2021

SECTION: 17 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

100 STEAM-ENHANCED CRUDE OIL PRODUCTION WELLS WITH CLOSED CASING VENTS

PERMIT UNIT REQUIREMENTS

1. Casing vent valves shall be closed and plugged. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All components to be screened shall be identified and categorized according to the following equipment types: connectors, flanges, open-ended lines (sample connections, drains, bleed valves, etc.), pump seals, valves and other (pressure relief devices, compressor seals, meters, etc.). [District Rule 2201] Federally Enforceable Through Title V Permit
3. Fugitive VOC emissions from components in vapor and condensate service shall not exceed 53.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall maintain with the permit accurate fugitive component counts of components in gas service and resulting emissions calculated using the emission factors in the USEPA's 1995 Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017) Oil and Gas Production Operations Average Emissions Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain with the permit an accurate, current listing of all steam enhanced wells connected to the casing vent control system and shall make such listing readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
6. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4401, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit
7. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: 1) The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system. The well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or 2) The steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system. [District Rule 4401, 5.1] Federally Enforceable Through Title V Permit
8. Permittee shall install and maintain an APCO-approved VOC collection and control system that is not open to the atmosphere and that is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to an APCO-approved control device that has a VOC destruction or removal efficiency of at least 99%, or that transports gases or vapors back to a process system. [District Rules 2201 and 4401, 5.1] Federally Enforceable Through Title V Permit
9. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. The permittee shall not use any components that leak in excess of the applicable leak standards as specified in this permit. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit
11. Permittee shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit
12. By January 30 of each year, permittee shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit
13. In accordance with the approved OMP, permittee shall meet all applicable operating, leak standards, inspection and re-inspection, leak repair, record keeping, and notification requirements of Rule 4401. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit
14. A gas leak is defined as the detection of a concentration of total organic compounds, above background (measured in accordance with EPA Method 21) that exceeds the following values: 1) A major gas leak is a detection of greater than 10,000 ppmv as methane; and 2) A minor gas leak is a detection of 400 to 10,000 ppmv as methane for pressure relief devices (PRDs) and 2,000 to 10,000 for components other than PRDs. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
15. A liquid leak is defined as the dripping of VOC-containing liquid. A major liquid leak is a visible mist or a continuous flow of liquid that is not seal lubricant. A minor liquid leak is a liquid leak that is not a major liquid leak and drips liquid at a rate of more than three drops per minute, except for seal lubricant. [District Rule 4401, 3.20] Federally Enforceable Through Title V Permit
16. During District compliance inspection, the following conditions shall be used to determination of a violation: 1) Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. Attended operations include draining or degassing operations, connection of temporary process equipment, sampling of process streams, emergency venting, and other normal operational needs, provided such operations are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere; 2) Existence of a component with a major liquid leak; 3) Existence of a component with a gas leak greater than 50,000 ppmv; or 4) Existence of a component leak consisting of a minor liquid or gas leak, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv, in excess of the allowable number of leaks specified in Table 2 of Rule 4401. [District Rule 4401, 5.2.2] Federally Enforceable Through Title V Permit
17. Permittee shall keep all hatches closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit
18. Except for pipes and unsafe-to-monitor components, permittee shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of Rule 4401 shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.1 & 5.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.4.5] Federally Enforceable Through Title V Permit
20. Permittee shall inspect audio-visually (by hearing and by sight) for leaks all accessible operating pumps, compressors, and pressure relief devices (PRDs) in service at least once each calendar week. [District Rule 4401, 5.4.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of Rule 4401 shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401, 5.4.3.2] Federally Enforceable Through Title V Permit
22. Permittee shall initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release. Permittee shall re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection. [District Rule 4401, 5.4.4.1] Federally Enforceable Through Title V Permit
23. Permittee shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. [District Rule 4401, 5.4.4.2] Federally Enforceable Through Title V Permit
24. Except for PRDs, permittee shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401, 5.4.4.3] Federally Enforceable Through Title V Permit
25. Permittee shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak. The following information shall be included on the tag: 1) the date and time of leak detection; 2) the date and time of leak measurement; 3) leak concentration in ppmv for a gaseous leak; 4) description of whether it is a major liquid leak or a minor liquid leak; and 5) whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit
26. Permittee shall keep the tag affixed to the component until all of the following conditions have been met: 1) the leaking component has been repaired or replaced, and 2) the component has been re-inspected using the test methods described in this permit; and 3) the component is found to be in compliance with the requirements of Rule 4401. [District Rule 4401, 5.5.2] Federally Enforceable Through Title V Permit
27. Permittee shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.5.3] Federally Enforceable Through Title V Permit
28. Except for leaking critical components or leaking essential components, if the operator has minimized a leak but the leak still exceeds the applicable leak limits, the operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: 1) repair or replace the leaking component; 2) vent the leaking component to a VOC collection and control system; or 3) remove the leaking component from operation. [District Rule 4401, 5.5.4] Federally Enforceable Through Title V Permit
29. The leak rate, measured after leak minimization has been performed, shall be used to determine the applicable repair period specified in Table 3 of Rule 4401 and the time of initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401, 5.5.5] Federally Enforceable Through Title V Permit
30. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

31. Permittee shall maintain an inspection log in which, at a minimum, all of the following information shall be recorded for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type; 2) The location, type, and name or description of each leaking component and description of any unit where the leaking component is found; 3) The date of leak detection and the method of leak detection; 4) For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of leaking components; 6) The identity and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number; and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit
32. Permittee shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with USEPA Method 21. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit
33. Annual control efficiency compliance tests shall be performed by source testers certified by the California Air Resource Board (CARB) on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive these source testing requirements if the vapor control system does not exhaust to atmosphere, or if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine, or in a smokeless flare. [District Rule 4401, 6.2.1 & 6.2.2] Federally Enforceable Through Title V Permit
34. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit
35. VOC content shall be determined using ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit
36. VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.4] Federally Enforceable Through Title V Permit
37. Permittee shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures, as necessary. Permittee shall maintain at the facility the copies of the training records of the training program. [District Rule 4401, 6.1.6 & 6.5] Federally Enforceable Through Title V Permit
38. Unless the source testing requirement is waived by the District, permittee shall maintain source test records which show that the control efficiency requirements of the VOC collection and control system have been satisfied. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit
39. Permittee shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

40. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-549-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

WEMCO UNIT WITH VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-521

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged only to vapor control system listed on permit S-1372-521. Vapor control system shall have a minimum control efficiency of 95%. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
5. The VOC content of the gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Operator shall conduct quarterly gas sampling for gas exiting the separator pressure vessel to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. If gas samples are equal to or less than 10% VOC by weight for 8 consecutive quarterly samplings, sampling frequency shall only be required annually. If the VOC content of the gas sample is greater than 10% VOC content for any sample, the source shall resume fugitive component counts for all components associated with the tank until the VOC content of at least 2 consecutive quarterly gas samples are equal to or less than 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
8. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
9. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-550-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL FREEWATER KNOCKOUT (FWKO) VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-1372-517

PERMIT UNIT REQUIREMENTS

1. The FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the FWKO and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to the vapor control system listed on S-1372-517. [District Rule 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. A liquid leak is defined as an organic liquid drip rate of more than three drops per minute and such a rate is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
4. All piping, fittings, and valves on this tank/vessel shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley

Air Pollution Control District

PERMIT UNIT: S-1372-551-0

EXPIRATION DATE: 05/31/2021

EQUIPMENT DESCRIPTION:

1,200 BBL FREEWATER KNOCKOUT (FWKO) VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-1372-517

PERMIT UNIT REQUIREMENTS

1. The FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the FWKO and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to the vapor control system listed on S-1372-517. [District Rule 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. A liquid leak is defined as an organic liquid drip rate of more than three drops per minute and such a rate is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
4. All piping, fittings, and valves on this tank/vessel shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-552-0

EXPIRATION DATE: 05/31/2021

SECTION: 15 **TOWNSHIP:** 31S **RANGE:** 22E

EQUIPMENT DESCRIPTION:

1,200 BBL FREEWATER KNOCKOUT (FWKO) VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-1372-517

PERMIT UNIT REQUIREMENTS

1. The FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the FWKO and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak-free condition. Vapors shall be discharged to the vapor control system listed on S-1372-517. [District Rule 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. A liquid leak is defined as an organic liquid drip rate of more than three drops per minute and such a rate is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
4. All piping, fittings, and valves on this tank/vessel shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 4623] Federally Enforceable Through Title V Permit
6. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1372-554-0

EXPIRATION DATE: 05/31/2021

SECTION: 24 **TOWNSHIP:** 26S **RANGE:** 20E

EQUIPMENT DESCRIPTION:

3,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK #10841 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMIT S-1372-513 (SECURITY LEASE)

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. The VOC control device shall be either of the following: a vapor return or condensation system that connects to a gas pipeline distribution system, or an approved VOC destruction device that reduces the inlet VOC emissions by at least 95% by weight as determined by the test method specified in Section 6.4.6. [District Rule 4623] Federally Enforceable Through Title V Permit
2. All piping, valves, and fittings shall be constructed and maintained in a leak free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
5. VOC fugitive emissions from the components in gas service on tank shall not exceed 0.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Maximum VOC content of vapor in the tank vapor space and vapor control system piping shall not exceed 68% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain accurate component count for tank according to EPA's "Protocol for Equipment Leak Emission Estimate," Table 2-4, Oil and Gas Production Operations Average Emission Factors. Permittee shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC content of the tank vapor space and tank vapor control system gas shall be tested at least once annually. [District Rule 2201] Federally Enforceable Through Title V Permit
9. VOC content of gas shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or an equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
10. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

11. Any component found to be leaking on two consecutive annual inspections is in violation of the District Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623] Federally Enforceable Through Title V Permit
12. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of this rule. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of this rule. [District Rule 4623] Federally Enforceable Through Title V Permit
17. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623] Federally Enforceable Through Title V Permit
19. This tank shall be degassed before commencing interior cleaning by following one of the following options: 1) exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less, or 2) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia, or 3) by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

20. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623] Federally Enforceable Through Title V Permit
21. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623] Federally Enforceable Through Title V Permit
22. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623] Federally Enforceable Through Title V Permit
23. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623] Federally Enforceable Through Title V Permit
24. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623] Federally Enforceable Through Title V Permit
25. If the tank contains crude oil with a TVP of 1.5 psia or greater, during sludge removal, the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623] Federally Enforceable Through Title V Permit
26. If the tank contains crude oil with a TVP of 1.5 psia or greater, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623] Federally Enforceable Through Title V Permit
27. If the tank contains crude oil with a TVP of 1.5 psia or greater, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit
28. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
29. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

ATTACHMENT C

Detailed Facility Report

Detailed Facility Report
For Facility 1372 and excluding Deleted Permits
Sorted by Facility Name and Permit Number

6/24/25
2:25 pm

SENTINEL PEAK RESOURCES CA LLC HEAVY OIL WESTERN STATIONARY SOURCE CA		FAC # STATUS: TELEPHONE:	S 1372 A	TYPE: TOXIC ID:	TitleV 60203	EXPIRE ON: AREA: INSP. DATE:	05/31/2021 81 / 320 02/26

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
S-1372-2-30	32 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	32.0 MMBTU/HR TEOR/NATURAL GAS-FIRED STEAM GENERATOR #5 (DIS #44826-70) WITH NORTH AMERICAN MAGNA-FLAME 4211-32-LE LOW-NOX BURNER WITH FGR AND O2 CONTROLLER (GAMBLE LEASE)
S-1372-4-25	25.2 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	25.2 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#4) (DIS #44784-67) WITH NORTH AMERICAN MAGNA-FLAME 4211-25-LE LOW-NOX BURNER WITH FGR AND O2 CONTROLLER (GAMBLE LEASE)
S-1372-8-32	32 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	32 MMBTU/HR J.F. NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#10) (DIS# 44510-76) WITH NORTH AMERICAN LOW NOX BURNER, FGR, AND O2 CONTROLLER (E&M LEASE)
S-1372-10-24	62.5MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#11) (DIS# 44511-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER (BREMER LEASE)
S-1372-13-29	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#16) (DIS# 12667-79) EQUIPPED WITH A NORTH AMERICAN G-LE ULTRA LOW-NOX BURNER, FGR AND O2 CONTROLLER
S-1372-14-27	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#13 BREMER, DIS# 44521-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, O2 CONTROLLER AND FGR
S-1372-16-27	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR (#12) (DIS# 44519-76) EQUIPPED WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER AND EXHAUST GAS CONNECTED TO SCRUBBER/ESP LISTED ON S-1372-127 (MCKITTRICK FRONT LEASE)
S-1372-17-33	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#19) (DIS# 45002-80) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR
S-1372-18-27	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (#28 DIS# 45003-80) EQUIPPED WITH FLUE GAS RECIRCULATION (FGR)
S-1372-19-29	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#29) (DIS# 45004-80) EQUIPPED WITH A NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR
S-1372-20-27	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#30) (DIS# 45005-80) EQUIPPED WITH A NORTH AMERICAN, MODEL MAGNA-FLAME G-LE, LOW NOX BURNER, FGR AND O2 CONTROLLER
S-1372-24-31	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#20 DIS# 45220-81) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

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S-1372-29-32	30 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	30.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR #23 (DIS #45223-80) WITH NORTH AMERICAN MAGNA-FLAME G-LE LOW NOX BURNER, FGR, AND O2 CONTROLLER
S-1372-30-27	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL/CASING GAS-FIRED STEAM GENERATOR (#33) (DIS# 45233-82) WITH O2 CONTROLLER, LOW-NOX BURNER AND FGR
S-1372-31-27	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/CASING GAS/TANK VAPOR RECOVERY GAS-FIRED STEAM GENERATOR (#34) (DIS# 45234-82) EQUIPPED WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER
S-1372-32-26	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#35) (DIS# 45235-82) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER
S-1372-33-27	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#36) (DIS# 45236-82) EQUIPPED WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER
S-1372-34-27	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/CASING GAS-FIRED STEAM GENERATOR (#37) (DIS# 45237-82) WITH O2 CONTROLLER, LOW NOX BURNER, AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS
S-1372-74-19	32.8 MMBtu/hr (flares)	3020-02 H	1	1,238.00	1,238.00	A	WELL VENT VAPOR COLLECTION AND CONTROL SYSTEM, SHARED WITH VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-370, INCLUDING A 12.8 MMBTU/HR KALDAIR FLARE, 20 MMBTU/HR JOHN ZINK STANDBY FLARE, SEPARATOR(S), HEAT EXCHANGER, ONE SULFUR REMOVAL SYSTEM, KNOCKOUT DRUM(S), VAPOR RECOVERY SKID (VAPOR B), THREE PHASE SEPARATORS, COMPRESSORS, HEAT EXCHANGERS, PUMPS, AND PIPING TO THE BREMER LEASE TEOR VAPOR CONTROL SYSTEM S-1372-77 (E&M LEASE)
S-1372-76-22	162 wells	3020-09 A	162	11.23	1,819.26	A	TEOR OPERATION INCLUDING 162 STEAM ENHANCED WELLS, WELL VENT VAPOR COLLECTION SYSTEM, STANDBY FLARE, HEAT EXCHANGERS, SEPARATORS, COMPRESSORS, TANKS, & VAPOR PIPING TO UNITS S-1372-13, '-16, & '-24 (DOME/TUMBADOR LEASE)
S-1372-77-25	450 wells	3020-09 A	450	11.23	5,053.50	A	TEOR OPERATION WELL VENT VAPOR COLLECTION SYSTEM WITH 450 STEAM DRIVE WELLS, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, SULFUR REMOVAL SYSTEM, COMPRESSORS, VAPOR PIPING TO STEAM GENERATORS, 33.3 MMBTU/HR STANDBY FLARE, AND PIPING FROM THE E&M LEASE TEOR VAPOR CONTROL SYSTEM S-1372-74 (BREMER LEASE)
S-1372-87-18	98 Wells	3020-09 A	98	11.23	1,100.54	A	TEOR OPERATION WITH WELL CASING COLLECTION SYSTEM WITH VAPOR PIPING TO UNITS S-1372-100, SERVING 98 STEAM ENHANCED WELLS, WELL COLLECTION PIPING, FLARE, NONCONDENSIBLE VAPOR PIPING TO FLARE, SULFA CHECK UNIT, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, COMPRESSORS, LUBE OIL TANKS, AND PUMPS (WELPORT LEASE)

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S-1372-99-10	132 wells	3020-09 A	132	11.23	1,482.36	A	TEOR OPERATION INCLUDING 132 STEAM ENHANCED WELLS, WELL VENT VAPOR RECOVERY SYSTEM AND VAPOR PIPING TO UNIT S-1372-100, SLUG CATCHER, SCRUBBERS, HEAT EXCHANGER, COMPRESSORS, PUMPS, STANDBY FLARE, SULFA CHECK SYSTEM, & VAPOR PIPING TO UNIT S-1372-26 (MCKITTRICK FEE/HOYT LEASE)
S-1372-100-39	933 wells	3020-09 A	933	11.23	10,477.59	A	TEOR OPERATION WITH WELL CASING COLLECTION SYSTEM WITH VAPOR PIPING TO UNIT S-1372-99 SERVING 933 STEAM ENHANCED WELLS WITH 3-PHASE SEPARATORS, STANDBY FLARE, SLUG CATCHER, SCRUBBERS, HEAT EXCHANGERS, COMPRESSORS, PUMPS, SULFA CHECK AND LIQUID SULFUR REMOVAL SYSTEMS (GAMBLE/MCKITTRICK FRONT)
S-1372-111-16	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL/WASTE GAS-FIRED STEAM GENERATOR (#46) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FGR
S-1372-112-17	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#45 GAMBLE) WITH NORTH AMERICAN 4231-GLE ULTRA-LOW NOX BURNER, O2 CONTROLLER, AND FGR
S-1372-113-15	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#44) WITH NORTH AMERICAN GLE LOW NOX BURNER, O2 CONTROLLER AND FGR
S-1372-114-3	210,000 gallons	3020-05 E	1	296.00	296.00	A	5,000 BBL SUMP REPLACEMENT TANK WITH ASSOCIATED VALVES, FLANGES, PUMPS, AND PIPING
S-1372-115-3	210,000 gallons	3020-05 E	1	296.00	296.00	A	5,000 BBL SUMP REPLACEMENT TANK WITH ASSOCIATED VALVES, FLANGES, PUMPS, AND PIPING
S-1372-116-3	84,000 gallons	3020-05 D	1	223.00	223.00	A	2,000 BBL SUMP REPLACEMENT TANK WITH ASSOCIATED VALVES, FLANGES, PUMPS, AND PIPING
S-1372-117-3	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF SUMP REPLACEMENT TANK WITH ASSOCIATED VALVES, FLANGES, PUMPS AND PIPING
S-1372-127-28	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR #43 EQUIPPED WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE LOW NOX BURNER, FGR, O2 CONTROLLER, AND EXHAUST GAS SOX SCRUBBER/ESP SHARED WITH S-1372-317 (MCKITTRICK FRONT LEASE)
S-1372-128-7	105,000 gallons	3020-05 E	1	296.00	296.00	A	2,500 BBL WASH TANK (#80) AND TWO FREE WATER KNOCKOUT VESSELS WITH VAPOR RECOVERY SYSTEM SHARED WITH PERMIT UNITS S-1372-129, 130, 131, 132, AND 135 (UNIT LEASE)
S-1372-129-7	84,000 gallons	3020-05 D	1	223.00	223.00	A	2,000 BBL PRODUCTION TANK (#78) SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT UNIT S-1372-128
S-1372-130-7	84,000 gallons	3020-05 D	1	223.00	223.00	A	2,000 BBL WATER DISPOSAL TANK (#79) WITH VAPOR RECOVERY SYSTEM SHARED WITH S-1372-128
S-1372-131-7	84,000 gallons	3020-05 D	1	223.00	223.00	A	2,000 BBL PRODUCTION TANK (#77) SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT UNIT S-1372-128

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S-1372-132-5	210,000 gallons	3020-05 E	1	296.00	296.00	A	5,000 BBL REJECT TANK (#77) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-128
S-1372-139-12	10 MMBtu/hr	3020-02 G	1	980.00	980.00	A	10.0 MMBTU/HR NATURAL GAS/LPG FIRED HEATER TREATER #1 (#25118) WITH TWO 5 MMBTU/HR KVAERNER-ZINK LOW NOX FORCED DRAFT BURNERS AND FLUE GAS RECIRCULATION, FUEL INDUCED FLUE GAS RECIRCULATION, TWO STACKS AND PLC AUTOMATED CONTROLS
S-1372-142-7	42,000 gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-77 WITH TWO PERMIT EXEMPT BURNERS (PEER-11)
S-1372-143-9	42,000 gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-77 WITH TWO PERMIT EXEMPT BURNERS (PEER-12)
S-1372-144-9	42,000 gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-77 WITH TWO PERMIT EXEMPT BURNERS (PEER-13)
S-1372-146-9	8 MMBtu/hr	3020-02 G	1	980.00	980.00	A	8 MMBTU/HR NATURAL GAS FIRED HEATER TREATER OPERATING AS AN UNFIRED FREE WATER KNOCKOUT (#2) (#10290)
S-1372-186-9	2 gasoline dispensing nozzels	3020-11 A	2	42.00	84.00	A	GASOLINE DISPENSING OPERATION WITH ONE 10,000 GALLON FIREGUARD ABOVEGROUND STORAGE TANK SERVED BY OPW EVR PHASE I VAPOR RECOVERY SYSTEM (VR-401-C), STANDING LOSS CONTROL (VR-301-F), AND TWO FUELING POINTS WITH TWO GASOLINE DISPENSING NOZZLES SERVED BY BALANCE PHASE II VAPOR RECOVERY SYSTEM (G-70-162-A)
S-1372-187-16	3.0 MW	3020-08A C	1	1,840.00	1,840.00	A	3.0 MW COGEN FACILITY INCLUDING SOLAR CENTAUR MODEL T4701 GAS FIRED TURBINE ENGINE GENERATOR SET WITH INLET AIR EVAPORATIVE COOLER, GAS FIRED 31 MMBTU/HR MAXFIRE MODEL 110 SERIES DUCT BURNER, HEAT RECOVERY STEAM GENERATOR, SCR, AND KOCH COALESCER
S-1372-188-15	3.0 MW	3020-08A C	1	1,840.00	1,840.00	A	3.0 MW COGEN FACILITY INCLUDING SOLAR CENTAUR MODEL T4701 GAS FIRED TURBINE ENGINE GENERATOR SET WITH INLET AIR EVAPORATIVE COOLER, GAS FIRED 31 MMBTU/HR MAXFIRE MODEL 110 SERIES DUCT BURNER, HEAT RECOVERY STEAM GENERATOR, SCR, AND KOCH COALESCER
S-1372-194-17	5.0 MW	3020-08A D	1	3,674.00	3,674.00	A	5.0 MW COGEN FACILITY INCLUDING SOLAR TAURUS MODEL 60-T73005 GAS FIRED TURBINE ENGINE GENERATOR SET WITH SOLONOX COMBUSTORS, GAS FIRED MAXFIRE MODEL 110 SERIES DUCT BURNER, SCR, AND HEAT RECOVERY STEAM GENERATOR
S-1372-209-4	84,780 gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#010554) AND ONE FREE WATER KNOCKOUT VESSEL (GAMBLE LEASE), EACH WITH A VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1372-210, '-211, '-212, AND '-213, AND VENTED TO TEOR OPERATION S-1372-100
S-1372-210-4	2019 BBLs	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#010555) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209

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S-1372-211-4	2019 BBLs	3020-05 E	1	296.00	296.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#006798) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209
S-1372-212-4	2000 BBLs	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10664) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209
S-1372-213-4	1520 BBLs	3020-05 D	1	223.00	223.00	A	1,520 BBL FIXED ROOF CRUDE OIL STORAGE/ CLARIFIER TANK WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209
S-1372-214-4	250 BBLs	3020-05 B	1	113.00	113.00	A	250 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#GD-TK-1) WITH VAPOR CONTROL SYSTEM SHARED WITH TANK S-1372-209
S-1372-215-3	84,780 gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #10695 AND ONE FREE WATER KNOCKOUT VESSEL (MCFEE LEASE)
S-1372-216-3	84,780 gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10694)
S-1372-217-3	84,780 gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10716)
S-1372-218-7	84,000 gallons	3020-05 D	1	223.00	223.00	A	2,000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#10602) (HOPKINS LEASE) WITH VAPOR CONTROL SYSTEM SHARED WITH TANKS S-1372-235, '-256, '-257, '-419, '-420, AND '-421 VENTING TO STEAM GENERATORS S-1372-18, '-31, AND TEOR SYSTEM S-1372-316
S-1372-219-4	10,500 Gallons	3020-05 B	1	113.00	113.00	A	250 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#8472)
S-1372-220-4	84,780 gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#8707) WITH VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1372-221, '-416, AND '-441 VENTED TO CASING VAPOR COLLECTION SYSTEM LISTED ON S-1372-100 (STAR FEE)
S-1372-221-4	2000 BBLs	3020-05 D	1	223.00	223.00	A	1,600 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10602) CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-220 (STAR FEE)
S-1372-222-4	42,000 Gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#6799)
S-1372-224-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10635)
S-1372-225-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10646)
S-1372-226-4	210,000 Gallons	3020-05 E	1	296.00	296.00	A	5,000 BBL FIXED ROOF CRUDE OIL STORAGE/ CLARIFIER TANK AND THREE FREE WATER KNOCKOUT VESSELS
S-1372-227-3	68,389 Gallons	3020-05 D	1	223.00	223.00	A	1,628 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#TK-1)
S-1372-235-5	84,000 Gallons	3020-05 D	1	223.00	223.00	A	2,000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#010766) (HOPKINS LEASE) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON '-218
S-1372-246-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #10357 AND FIVE FREE WATER KNOCKOUT VESSELS (BREMER LEASE) COMPRESSORS, VAPOR RECOVERY SYSTEM SHARED WITH S-1372-247, '-248, '-249, '-250, '-251, '-252, '-253, '-254, '-255, AND '-258, PIPING ROUTED TO DOGGR APPROVED WELLS OR SENT OFFSITE TO INSTALL VAPOR RECOVERY SYSTEM

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S-1372-247-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10413) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246
S-1372-248-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10336) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246
S-1372-249-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10337) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246
S-1372-250-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10358) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246
S-1372-251-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10356) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246
S-1372-252-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10420) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246
S-1372-253-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10421) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246
S-1372-254-4	127,000 Gallons	3020-05 E	1	296.00	296.00	A	3,023 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBWT-1) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246
S-1372-255-5	420,000 gallons	3020-05 E	1	296.00	296.00	A	10,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBWT-2) VENTED TO VAPOR CONTROL SYSTEM S-1372-77 (BREMER LEASE) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246
S-1372-256-5	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#UBFT-1) (HOPKINS LEASE) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON '-218
S-1372-257-5	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED-ROOF CRUDE OIL STORAGE TANK (#EBFT-1) (HOPKINS LEASE) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON '-218
S-1372-258-4	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBFT-1) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON S-1372-246
S-1372-259-5	21,000 Gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#LBST-1)
S-1372-263-7	84,000 Gallons	3020-05 D	1	223.00	223.00	A	2,000 BBL FIXED ROOF CRUDE OIL RECEIVING TANK WITH GAS BOOT (#10757) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370
S-1372-264-7	63,000 Gallons	3020-05 D	1	223.00	223.00	A	1,500 BBL FIXED ROOF CRUDE OIL WASH TANK (#1500WT) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370
S-1372-265-7	84,000 Gallons	3020-05 D	1	223.00	223.00	A	2,000 BBL FIXED ROOF CRUDE OIL LACT SHIPPING TANK (#10755) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370
S-1372-266-5	21,000 Gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#500VR-1)

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S-1372-267-7	42,000 Gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#1000WT) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370
S-1372-268-7	42,000 Gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF WASTE WATER STORAGE TANK (#1000WW-T) SERVED BY VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-370
S-1372-270-3	105,000 Gallons	3020-05 E	1	296.00	296.00	A	2,500 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#5000WTR)
S-1372-271-3	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9935) AND ONE FREE WATER KNOCKOUT VESSEL (TUMBADOR LEASE)
S-1372-272-3	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9934)
S-1372-273-3	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10370)
S-1372-274-4	10,500 Gallons	3020-05 B	1	113.00	113.00	A	250 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH SHARED VAPOR CONTROL SYSTEM (SUMP TANK, TUMBADOR LEASE)
S-1372-275-3	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK #9936 AND ONE FREE WATER KNOCKOUT VESSEL (DOME LEASE)
S-1372-276-3	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9937)
S-1372-278-3	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10368)
S-1372-279-3	173,092 Gallons	3020-05 E	1	296.00	296.00	A	4,121 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#6500 WTR)
S-1372-280-3	42,000 Gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (FUEL TK.)
S-1372-284-3	68,389 Gallons	3020-05 D	1	223.00	223.00	A	1,628 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#9143-WT)
S-1372-285-3	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#10494)
S-1372-286-3	42,000 Gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#2731)
S-1372-289-4	84,000 Gallons	3020-05 D	1	223.00	223.00	A	2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK #6928 WITH TWO FREE WATER KNOCKOUT VESSELS (KEENE LEASE)
S-1372-292-3	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#1783)
S-1372-293-3	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#KW-SB-1)
S-1372-294-3	84,780 Gallons	3020-05 D	1	223.00	223.00	A	2,019 BBL FIXED ROOF CRUDE OIL STORAGE TANK (#KW-C-1)
S-1372-308-6	20 wells	3020-09 B	20	11.23	224.60	A	20 UNCONTROLLED CYCLIC OIL WELLS
S-1372-312-15	165 Wells	3020-09 A	165	11.23	1,852.95	A	TEOR OPERATION INCLUDING 165 STEAM ENHANCED WELLS, WELL VENT VAPOR CONTROL SYSTEM, WELL COLLECTION PIPING, STANDBY FLARE, VAPOR PIPING TO S-1372-17 AND STANDBY FLARE, THREE-PHASE SEPARATORS, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, STORAGE VESSELS, COMPRESSORS, LUBE OIL TANKS, AND PUMPS (KEENE-KELLY-SOUTH CERRITOS-WILLIAMS LEASES)
S-1372-313-3	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL CRUDE OIL STORAGE TANK (TULARE W-T)

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PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
S-1372-314-3	21,000 Gallons	3020-05 C	1	165.00	165.00	A	500 BBL CRUDE OIL STORAGE TANK (UO 10600)
S-1372-315-3	21,000 Gallons	3020-05 C	1	165.00	165.00	A	500 BBL CRUDE OIL STORAGE TANK (UO 10601)
S-1372-316-21	285 wells	3020-09 A	285	11.23	3,200.55	A	TEOR OPERATION SERVING 285 STEAM ENHANCED WELLS, WELL COLLECTION PIPING, FLARE, WELL VENT VAPOR CONTROL SYSTEM VAPOR PIPING TO FLARE, HEAT EXCHANGERS, GAS/LIQUID SEPARATORS, SCRUBBER, COMPRESSORS, LUBE OIL TANK AND SULFA TREAT SYSTEM (HOPKINS LEASE)
S-1372-317-18	67.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	67.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR EQUIPPED WITH A NORTH AMERICAN MODEL MAGNA-FLAME G-LE LOW NOX BURNER, FGR AND EXHAUST GAS SOX SCRUBBER W/ESP SHARED WITH S-1372-127 (MCKITTRICK FRONT LEASE)
S-1372-318-11	67.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	67.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR (HOPKINS LEASE)
S-1372-319-21	67.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	67.5 MMBTU/HR NATURAL GAS/TEOR/TVR GAS-FIRED STEAM GENERATOR (#49) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR. OPERATING AT TWO LOCATIONS: MCKITTRICK FRONT (NW6, T30S R21E) AND HOPKINS LEASE (NW10, T29S R21E)
S-1372-320-3	63,000 Gallons	3020-05 D	1	223.00	223.00	A	1,500 BBL FIXED ROOF STOCK TANK (TK #1) (MORRIS LEASE)
S-1372-322-3	56,700 Gallons	3020-05 D	1	223.00	223.00	A	1,350 BBL WASH TANK (MORRIS LEASE)
S-1372-323-4	2000 BBLs	3020-05 D	1	223.00	223.00	A	2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH VAPOR RECOVERY SYSTEM SHARED WITH TANKS S-1372-324 AND '443 ROUTED TO CASING VAPOR COLLECTION SYSTEM LISTED ON PERMIT S-1372-100 (MCKITTRICK FRONT LEASE)
S-1372-324-4	2000 BBL	3020-05 D	1	223.00	223.00	A	2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK WITH P/V VALVE CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-323 (MCKITTRICK FRONT LEASE)
S-1372-329-9	62 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION
S-1372-334-23	27.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	27.5 MMBTU/HR NATURAL GAS/WASTE GAS-FIRED STEAM GENERATOR (#56) (HSG #577) WITH FGR AND NORTH AMERICAN MAGNA-FLAME 4211 27-LE LOW-NOX BURNER OPERATED AT VARIOUS SPECIFIED LOCATIONS
S-1372-355-12	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#52) (DIS #22457-79) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER AND FGR (STAR FEE LEASE)
S-1372-356-12	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22468-79) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, FGR AND O2 CONTROLLER

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S-1372-357-12	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22469-79) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION
S-1372-358-13	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22470-79) WITH FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
S-1372-359-10	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (DIS #22632-80) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION
S-1372-370-7	15 hp	3020-01 A	1	107.00	107.00	A	TANK VAPOR CONTROL SYSTEM SERVING TANKS S-1372-263, -264, -265, -267 AND -268, WITH COMPRESSED VAPORS ROUTED TO STEAM GENERATOR PERMIT S-1372-8 AND TEOR SYSTEM PERMIT S-1372-74 FOR DISPOSAL
S-1372-371-8	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH A NORTH AMERICAN MAGNA FLAME G-LE ULTRA LOW NOX BURNER, OXYGEN (O2) CONTROLLER AND FLUE GAS RECIRCULATION, OPERATED AT VARIOUS SPECIFIED LOCATIONS
S-1372-372-10	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/TEOR GAS/TVR GAS-FIRED (TVR SYSTEM GAS ALLOWED AT REARDON LEASE ONLY) STEAM GENERATOR (#64) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, OXYGEN (O2) CONTROLLER AND FGR
S-1372-373-10	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#65) (DIS# 28623-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER AND FGR
S-1372-374-8	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#57) (DIS# 21939-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER
S-1372-375-6	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#58) (DIS# 28623-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER
S-1372-376-10	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#59) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER
S-1372-377-8	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#60) (DIS# 28618-82) WITH A NORTH AMERICAN GLE ULTRA LOW NOX BURNER
S-1372-378-6	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#34) (DIS #19965-74) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS
S-1372-379-6	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#37) (DIS #20623-76) WITH NORTH AMERICAN G-LE ULTRA LOW NOX BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

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S-1372-387-5	116 Wells	3020-09 A	116	11.23	1,302.68	A	TEOR OPERATION WITH 116 CYCLIC CLOSED CASING VENT WELLS, SEPARATORS, HEAT EXCHANGERS, SULFA TREAT SYSTEM, COMPRESSORS, PUMPS, VAPOR RECOVERY SKIDS, SCRUBBER(S) AND KNOCK OUT DRUM
S-1372-388-6	14.1 MMBtu/hr Flare	3020-02 G	1	980.00	980.00	A	3,000 BBL STOCK TANK VENTED TO VAPOR CONTROL SYSTEM WITH A 1.0 MMSCF/DAY JOHN ZINK AZDAIR PLA AIR-ASSISTED PRODUCED GAS FLARE SHARED BETWEEN PERMIT UNITS S-1372-388, '389, '390, '391 AND '392 INCLUDING INLET COOLER, SUCTION SCRUBBER, DISCHARGE SCRUBBER, PUMPS, AND COMPRESSORS
S-1372-389-3	126,000 Gallons	3020-05 E	1	296.00	296.00	A	3,000 BBL REJECT TANK (T-440) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388
S-1372-390-3	126,000 Gallons	3020-05 E	1	296.00	296.00	A	3,000 BBL CLARIFIER TANK (T-310) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388
S-1372-391-3	42,000 Gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL SURGE TANK (T-320) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388
S-1372-392-3	42,000 Gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL DRAIN TANK (T-600) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-388
S-1372-393-3	210,000 Gallons	3020-05 E	1	296.00	296.00	A	5,000 BBL FIXED ROOF WASTE WATER TANK (#T480) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-370
S-1372-394-4	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (SG #67) WITH NORTH AMERICAN GLE MODEL G ULTRA LOW NOX BURNER, FGR, AND O2 CONTROLLER
S-1372-395-3	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE MODEL G ULTRA LOW NOX BURNER, FGR, AND O2 CONTROLLER
S-1372-404-2	92 TEOR wells	3020-09 A	92	11.23	1,033.16	A	TEOR SYSTEM INCLUDING 92 CLOSED VENT STEAM ENHANCED WELLS ROUTED TO VAPOR CONTROLLED 2-PHASE SEPARATOR AND TANKS S-1372-405 AND '406
S-1372-405-2	126,000 gallons	3020-05 E	1	296.00	296.00	A	3000 BBL CRUDE OIL TANK T-140 SERVED BY VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER(S), COMPRESSOR(S), KNOCKOUT DRUM(S), PUMP(S), AND SULFUR REMOVAL
S-1372-406-1	126,000 gallons	3020-05 E	1	296.00	296.00	A	3000 BBL CRUDE OIL TANK T-180 SERVED BY VAPOR CONTROL SYSTEM LISTED ON TEOR PERMIT S-1372-405
S-1372-407-1	210,000 gallons	3020-05 C	1	165.00	165.00	A	5,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK
S-1372-408-3	6.6 MMBtu/hr flare	3020-02 G	1	980.00	980.00	A	6.6 MMBTU/HR FLARE INDUSTRIES MODEL SF-VP-0616 COANDA EFFECT STANDBY FLARE WITH AUTOIGNITION SERVED BY GAS SCRUBBER; PROPANE AND/OR PUC NATURAL GAS AS PILOT FUEL (19Z LEASE)
S-1372-409-2	42,000 gal.	3020-05 C	1	165.00	165.00	A	1000 BBL FIXED ROOF WASH TANK WITH PV VENT (CYMRIC OIL FIELD)
S-1372-410-2	8,400 GALLON	3020-05 B	1	113.00	113.00	A	200 BBL FIXED ROOF STOCK TANK WITH PV VENT (CYMRIC OIL FIELD)

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S-1372-411-4	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MODEL MAGNA FLAME G-LE ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (GENERATOR #68)
S-1372-412-1	53,130 gallons	3020-05 D	1	223.00	223.00	A	1,265 BBL HEATER TREATER VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-100 WITH TWO PERMIT EXEMPT BURNERS (NATURAL GAS FIRED, 5 MMBTU/HR OR LESS)
S-1372-413-1	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE BURNER AND A FLUE GAS RECIRCULATION SYSTEM
S-1372-414-3	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE BURNER AND A FLUE GAS RECIRCULATION SYSTEM
S-1372-416-2	84,000 gallons	3020-05 D	1	223.00	223.00	A	2000 BBL FIXED-ROOF CRUDE OIL STORAGE TANK WITH P/V VALVE CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-220 (STAR FEE)
S-1372-417-2	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#71), WITH NORTH AMERICAN GLE ULTRA LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM (DOME)
S-1372-418-2	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN GLE ULTRA LOW NOX BURNER (OR EQUIVALENT) AND A FLUE GAS RECIRCULATION SYSTEM (HOPKINS)
S-1372-419-0	126,000 gallons	3020-05 E	1	296.00	296.00	A	3000 BBL FIXED-ROOF SUMP TANK (HOPKINS LEASE, T-5) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-218
S-1372-420-0	210,000 gallons	3020-05 E	1	296.00	296.00	A	5,000 BBL FIXED-ROOF CLARIFIER TANK (HOPKINS LEASE, T-6) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-218
S-1372-421-0	420,000 gallons	3020-05 E	1	296.00	296.00	A	10,000 BBL FIXED-ROOF CLARIFIER TANK (HOPKINS LEASE, T-7) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-218
S-1372-422-1	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-433) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)
S-1372-423-1	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-434) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)
S-1372-424-1	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL/ETHANE-RICH NATURAL/TEOR/TVR GAS-FIRED STEAM GENERATOR (MNJ-442) WITH A NORTH AMERICAN MAGNA FLAME LE ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND AN O2 CONTROLLER (STAR FEE LEASE)
S-1372-425-0	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH A NORTH AMERICAN GLE BURNER, OR EQUIVALENT, AND FLUE GAS RECIRCULATION
S-1372-426-0	4 WELLS	3020-09 A	4	11.23	44.92	A	THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 4 STEAM DRIVE WELLS

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S-1372-427-0	42,000 Gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK #10573
S-1372-428-0	84,000 Gallons	3020-05 D	1	223.00	223.00	A	2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK #2720
S-1372-429-0	18 MMBtu/hr steam generator	3020-02 H	1	1,238.00	1,238.00	A	18 MMBTU/HR LPG OR NATURAL GAS-FIRED STEAM GENERATOR
S-1372-430-0	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL WASH TANK WITH PV VALVE (BAND FEE LEASE)
S-1372-431-0	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL TANK WITH PV VALVE (BAND FEE LEASE)
S-1372-432-0	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL TANK WITH PV VALVE (BAND FEE LEASE)
S-1372-433-0	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL WASH TANK WITH PV VALVE (MIDWAY PACIFIC LEASE)
S-1372-434-0	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL TANK WITH PV VALVE (MIDWAY PACIFIC LEASE)
S-1372-435-0	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL TANK WITH PV VALVE (MIDWAY PACIFIC LEASE)
S-1372-436-1	85 MMBtu/hr steam generator	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#81) WITH A NORTH AMERICAN G-LE STANDARD BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
S-1372-437-0	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#76) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
S-1372-438-1	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#77) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
S-1372-439-0	85 mmbtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#78) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
S-1372-440-0	85 mmbtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR (#79) WITH A NORTH AMERICAN GLE BURNER, FLUE GAS RECIRCULATION AND AN O2 CONTROLLER
S-1372-441-0	210,000 gallons	3020-05 E	1	296.00	296.00	A	5,000 BBL FIXED ROOF CRUDE OIL STORAGE/CLARIFIER TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-220 (STAR FEE)
S-1372-442-0	500 BBLs	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL DRAIN TANK WITH PVRV
S-1372-443-0	5000 BBL	3020-05 E	1	296.00	296.00	A	5,000 BBL FIXED ROOF CRUDE OIL STORAGE/CLARIFIER TANK SERVED BY SHARED VAPOR RECOVERY SYSTEM LISTED ON S-1372-323
S-1372-448-0	300 bbl tank	3020-05 B	1	113.00	113.00	A	300 BBL FIXED ROOF CONSTANT LEVEL BLOWDOWN/DRAIN TANK WITH PV VALVE (E&M LEASE)

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PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
S-1372-449-0	42,000 gallons	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF CRUDE OIL DRAIN TANK WITH PV VALVE (E&M LEASE)
S-1372-450-0	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL TANK WITH PVRV (DOME LEASE)
S-1372-456-0	42,000 GAL TANK	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF CRUDE OIL STOCK TANK #5382 (RIPLEY-TATUM LEASE)
S-1372-457-0	42,000 GAL TANK	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF CRUDE OIL STOCK TANK #5386 (RIPLEY-TATUM LEASE)
S-1372-458-0	1.9 MMBTU/HR	3020-02 E	1	495.00	495.00	A	1.9 MMBTU/HR VERTICAL HEATER TREATER FIRED ON LEASE GAS (RIPLEY-TATUM LEASE)
S-1372-459-0	0.5 MMBTU/HR HEATER	3020-02 C	1	239.00	239.00	A	0.5 MMBTU/HR TANK HEATER FIRED ON LEASE GAS (RIPLEY-TATUM LEASE)
S-1372-460-0	42,000 GALLON TANK	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF CRUDE OIL STOCK TANK #30 (RIPLEY TATUM LEASE)
S-1372-461-0	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL STOCK TANK #2 (RIPLEY TATUM LEASE)
S-1372-462-0	21,000 GALLON TANK	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL STOCK TANK #3 (RIPLEY-TATUM LEASE)
S-1372-463-0	25.2 MMBTU/HR	3020-02 H	1	1,238.00	1,238.00	A	25.2 MMBTU/HR NATIONAL CO S/N S8736 NATURAL GAS/PROPANE/PRODUCTION GAS-FIRED STEAM GENERATOR WITH BURNER DIFFUSER PLATE AND FLUE GAS RECIRCULATION (FGR)
S-1372-464-0	99 CYCLIC WELLS	3020-09 A	99	11.23	1,111.77	A	THERMALLY ENHANCED OIL RECOVERY OPERATION INCLUDING 99 CYCLICALLY STEAMED ENHANCED CRUDE OIL PRODUCTION WELLS WITH CASING COLLECTION SYSTEM CONNECTED TO SALES GAS PIPELINE AND OPTIONAL SULFUR REMOVAL SYSTEM
S-1372-465-0	31,500 GALLONS	3020-05 C	1	165.00	165.00	A	750 BBL FIXED ROOF PETROLEUM WASH TANK (RIPLEY TRUST LEASE)
S-1372-466-0	21,000 GALLON	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF PETROLEUM STOCK TANK (RIPLEY TRUST LEASE)
S-1372-467-0	42,000 GALLON	3020-05 C	1	165.00	165.00	A	1,000 BBL FIXED ROOF PETROLEUM STOCK TANK (RIPLEY TRUST LEASE)
S-1372-468-0	6,720 GALLONS	3020-05 C	1	165.00	165.00	A	160 BBL OPEN TOP PETROLEUM WASH TANK (RIPLEY TATUM LEASE)
S-1372-469-0	62.5 MMBTU/HR	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR C.E. NATCO GAS/CASING GAS-FIRED STEAM GENERATOR WITH A NORTH AMERICAN MODEL GLE LOW-NOX BURNER AND FLUE GAS RECIRCULATION (HOPCO, H-2, DIS# 39454-87)
S-1372-470-0	10,500 gallon tank	3020-05 B	1	113.00	113.00	A	250 BBL FIXED ROOF CRUDE OIL STOCK TANK WITH P/V VENT (RIPLEY-TATUM LEASE)
S-1372-471-0	10,500 gallon tank	3020-05 B	1	113.00	113.00	A	250 BBL FIXED ROOF CRUDE OIL DRAIN TANK WITH P/V VENT (RIPLEY TATUM LEASE)

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S-1372-472-0	12,600 gallon tank	3020-05 B	1	113.00	113.00	A	300 BBL FIXED ROOF CONSTANT LEVEL CRUDE OIL CLARIFIER TANK WITH P/V VENT (RIPLEY TATUM LEASE)
S-1372-474-0	63,000 gal	3020-05 D	1	223.00	223.00	A	1,500 BBL FIXED ROOF PRODUCED WATER TANK STORAGE TANK #13857 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-477
S-1372-475-0	63,000 gal	3020-05 D	1	223.00	223.00	A	1,500 BBL FIXED ROOF CONSTANT LEVEL CRUDE OIL TANK #135775
S-1372-476-0	63,000 GALLONS	3020-05 D	1	223.00	223.00	A	1,500 BBL FIXED ROOF CRUDE OIL STORAGE TANK #13858
S-1372-477-0	63,000 GALLON FWKO VESSEL	3020-05 D	1	223.00	223.00	A	1,500 BBL FIXED ROOF TANK WITH A COMPRESSOR, 125,000 BTU/HR HI-RT-TYPE VAPOR INCINERATOR WITH LPG PILOT FUEL AND ASSOCIATED CONTROLS AND VAPOR PIPING SHARED WITH PERMIT UNITS S-1372-478, -481 AND -482
S-1372-478-0	86,000 gal	3020-05 D	1	223.00	223.00	A	2000 BBL FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-477
S-1372-479-0	19 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	19.0 MMBTU/HR NATURAL GAS/PROPANE-FIRED STEAM GENERATOR WITH GIDEON MODEL MGW-25R1 ULTRA LOW NOX BURNER
S-1372-480-1	10.4 MMBtu/hr	3020-02 G	1	980.00	980.00	A	THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 70 STEAM ENHANCED WELLS WITH OPEN CASING VENTS SERVED BY VAPOR CONTROL SYSTEM INCLUDING COMPRESSOR(S), GAS/LIQUID SEPARATOR, AND 10.4 MMBTU/HR FLARE
S-1372-481-0	21,000 gal	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF CRUDE OIL GAUGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON S-1372-477
S-1372-482-0	84,000 GALLON STORAGE TANK	3020-05 D	1	223.00	223.00	A	2,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO THE VAPOR RECOVERY CONTROL SYSTEM LISTED ON S-1372-477 (HOYT LEASE)
S-1372-483-0	10 MMBtu/hr	3020-02 G	1	980.00	980.00	A	10 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER WITH TWO SEPARATE 5.0 MMBTU/HR LOW NOX BURNERS CONNECTED TO VAPOR CONTROL SYSTEM S-1372-480
S-1372-485-0	16,700 KBTU/HR	3020-02 H	1	1,238.00	1,238.00	A	16.5 MMBTU/HR AIR ASSISTED PRODUCED GAS FLARE WITH REDUCED WASTE GAS FLOW TO NO MORE THAN 4.9 MMBTU/HR
S-1372-486-0	20,000 KBTU/HR	3020-02 H	1	1,238.00	1,238.00	A	20 MMBTU/HR TEOR GAS AND NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE MODEL 4211-21/X1288 LOW NOX BURNER
S-1372-487-0	325 STEAM ENHANCED WELLS	3020-09 A	325	11.23	3,649.75	A	THERMALLY ENHANCED OIL RECOVERY (TEOR) OPERATION WITH 325 CYCLIC WELLS SERVED BY A CASING VENT VAPOR CONTROL SYSTEM WITH LIQUID KNOCKOUT(S), HEAT EXCHANGER(S), H2S SULFA TREAT CONTACTOR VESSEL(S), AND COMPRESSOR(S) OR OPERATED WITH CLOSED CASING VENTS LOCATED IN THE EAST HALF OF SECTION 13, T11N, R24W AND SECTIONS 7, 18, 19, AND 20 T11N, R23W
S-1372-488-0	25 MMBTU/HR	3020-02 H	1	1,238.00	1,238.00	A	20.0 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH ACT GIDEON MGW-25 LOW NOX BURNER AND INDUCED FLUE GAS RECIRCULATION OPERATED AT VARIOUS SPECIFIED LOCATIONS WITHIN THE STATIONARY SOURCE

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S-1372-489-0	63,000 gal.	3020-05 D	1	223.00	223.00	A	1,500 BBL WELDED FIXED ROOF WASH TANK WITH VAPOR RECOVERY SYSTEM VENTED TO THE CASING GAS GATHERING SYSTEM AND APPROVED INCINERATION DEVICES STEAM GENERATORS S-1372-486, '488, '541 AND/OR FLARE S-1372-485 AND SERVING TANKS S-1372-490 THROUGH '498
S-1372-490-0	63,000 gal	3020-05 D	1	223.00	223.00	A	1,500 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON S-1372-489
S-1372-491-0	63,000 gal.	3020-05 D	1	223.00	223.00	A	1,500 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON S-1372-489
S-1372-492-0	63,000 gal	3020-05 D	1	223.00	223.00	A	1,500 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON S-1372-489
S-1372-493-0	25,200 gal.	3020-05 C	1	165.00	165.00	A	600 BBL FWKO UNIT CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON S-1372-489
S-1372-494-0	4500 gal	3020-05 A	1	91.00	91.00	A	107 BBL WEMCO UNIT CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON S-1372-489
S-1372-495-0	42,000 gal.	3020-05 C	1	165.00	165.00	A	1,000 BBL WELDED FIXED ROOF CRUDE OIL STORAGE TANK CONNECTED TO VAPOR RECOVERY SYSTEM LISTED ON S-1372-489
S-1372-496-0	25,200 gal.	3020-05 C	1	165.00	165.00	A	600 BBL WELDED FIXED ROOF CLARIFIER TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-489
S-1372-497-0	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL WELDED FIXED ROOF PRODUCED WATER TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-489
S-1372-498-0	21,000 gallons	3020-05 C	1	165.00	165.00	A	500 BBL WELDED FIXED ROOF SAND DUMP TANK CONNECTED TO THE VAPOR RECOVERY SYSTEM LISTED ON S-1372-489
S-1372-499-0	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM
S-1372-500-0	10 MMBTU/hr	3020-02 G	1	980.00	980.00	A	10 MMBTU/HR GAS-FIRED HEATER TREATER WITH TWO 5.0 ULTRA LOW-NOX MMBTU/HR BURNERS
S-1372-501-0	240,000 gallons	3020-05 E	1	296.00	296.00	A	5000 BBL WASH TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-489
S-1372-502-0	misc	3020-06	1	128.00	128.00	A	WEMCO UNIT SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-489
S-1372-503-0	10 MMBtu/hr	3020-02 G	1	980.00	980.00	A	10 MMBTU/HR GAS-FIRED C.E. NATCO M&M HEATER TREATER #3 WITH TWO 5.0 ULTRA LOW-NOX MMBTU/HR BURNERS
S-1372-504-2	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STRUTHERS STEAM GENERATOR WITH LOW NOX BURNER AND O2 CONTROLLER SERVED BY AIRPOL DUAL VALVE TRAY SOX SCRUBBER WITH CHEVRON TYPE MIST ELIMINATOR AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH S-1372-504 AND '520

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S-1372-505-0	12.6 MMBtu/hr burner	3020-02 G	1	980.00	980.00	A	12.6 MMBTU/HR NATURAL GAS-FIRED TRICO SUPERIOR MODEL X-4398 HEATER TREATER V-3 WITH TWO 6.3 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS
S-1372-506-0	85.0 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR STRUTHERS NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN LOW NOX BURNER AND FGR AUTHORIZED TO BE OPERATED AT VARIOUS SPECIFIED LOCATIONS
S-1372-507-0	10 MMBtu/hr	3020-02 G	1	980.00	980.00	A	10 MMBTU/HR NATURAL GAS-FIRED H.T.I. M&M HEATER TREATER #3 WITH TWO MAXON MODEL XPO EB ULTRA LOW NOX BURNERS OPERATING AT VARIOUS UNSPECIFIED LOCATIONS WITHIN FACILITY S-1372
S-1372-508-0	10 MMBtu/hr	3020-02 G	1	980.00	980.00	A	10 MMBTU/HR NATURAL GAS-FIRED H.T.I. HEATER TREATER #4, SA# 0392 WITH DORMANT BURNERS, FUNCTIONING AS AN EXEMPT FWKO PRESSURE VESSEL WHILE THE BURNERS ARE DORMANT
S-1372-509-0	62,500 kBtu/hr burner	3020-02 H	1	1,238.00	1,238.00	A	87.7 MMBTU/HR STRUTHERS NATURAL/TEOR GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA-FLAME LE BURNER, MULTIPLE LOCATIONS - M & M GENERATOR #5
S-1372-510-0	42,000 gallon storage	3020-05 C	1	165.00	165.00	A	42,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK WITH VAPOR RECOVERY SYSTEM
S-1372-511-0	10,500 GALLONS	3020-05 B	1	113.00	113.00	A	10,500 GALLON FIXED ROOF PETROLEUM STORAGE TANK WITH VAPOR RECOVERY SYSTEM
S-1372-512-0	7,560 GALLONS	3020-05 B	1	113.00	113.00	A	7,560 GALLON FIXED ROOF PETROLEUM STORAGE TANK WITH VAPOR RECOVERY SYSTEM
S-1372-513-0	21,000 Gallons	3020-05 C	1	165.00	165.00	A	500 BBL WASH TANK #10754 WITH VAPOR RECOVERY PIPING SHARED WITH PERMITS S-1372-514, '-515, '-516, '-518, '-531, '-537, '-538, '-540, '-546, AND '-554 (SECURITY LEASE)
S-1372-514-0	21,000 gallon	3020-05 C	1	165.00	165.00	A	21,000 GALLON FIXED ROOF SHIPPING TANK #10814 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMIT S-1372-513
S-1372-515-0	21,000 gallon	3020-05 C	1	165.00	165.00	A	21,000 GALLON FIXED ROOF WASH TANK #10815 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMITS-1372-513
S-1372-516-0	42,000 gallon	3020-05 C	1	165.00	165.00	A	42,000 GALLON FIXED ROOF SHIPPING TANK # 10824 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMIT S-1372-513
S-1372-517-0	711 steam enhanced wells	3020-09 A	711	11.23	7,984.53	A	THERMALLY ENHANCED OIL RECOVERY OPERATION WELL VENT VAPOR CONTROL SYSTEM SERVING 711 STEAM-ENHANCED CRUDE OIL PRODUCTION WELLS
S-1372-518-0	42,000 gallon	3020-05 C	1	165.00	165.00	A	1,000 BARREL FIXED-ROOF CRUDE OIL STORAGE TANK VENTING TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513
S-1372-519-0	4.9 MMBtu/hr.	3020-02 F	1	731.00	731.00	A	20 MMBTU/HR FLARE, 3 IN DIA X 12 FT TALL, WITH REDUCED WASTE GAS FLOW TO NO MORE THAN 4.9 MMBTU/HR, SERVING PRIMARY PRODUCTION WELL VENT VAPOR CONTROL SYSTEM, TANK BATTERY '-513 VAPOR CONTROL SYSTEM, & TEOR WELL VENT VAPOR CONTROL SYSTEM '-530 (STAR LEASE)

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S-1372-520-0	62.5 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	62.5 MMBTU/HR NATURAL/TEOR GAS FIRED STEAM GENERATOR (CUSA ID # 50-1-15A, DIS# 43005-78) WITH FLUE GAS RECIRCULATION, O2 CONTROLLER AND SO2 SCRUBBER AND WET ELECTROSTATIC PRECIPITATOR SHARED WITH UNIT S-1372-504
S-1372-521-0	5,000 bbl	3020-05 E	1	296.00	296.00	A	5,000 BBL FIXED ROOF FREE WATER KNOCKOUT TANK T-1 W/VAPOR CONTROL SYSTEM INCLUDING HEAT EXCHANGER, LIQUID KNOCKOUT VESSELS, & VAPOR COMPRESSOR WITH PIPING TO STEAM GENERATOR S-1372-520, HEATER TREATERS S-1372-525 AND '-526, AND SERVING TANKS S-1372-521, '-522, '-523, '-524, '-527, '-528, '-529, '-533, '-534, AND '-535, AND WEMCO S-1372-549 (MIDWAY SUNSET FIELD 15A TANK BATTERY)
S-1372-522-0	84,000 GALLONS	3020-05 D	1	223.00	223.00	A	2,000 BBL LACT TANK #T-2 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)
S-1372-523-0	42,000 GALLONS	3020-05 C	1	165.00	165.00	A	1,000 BBL SLOP TANK #T-4 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)
S-1372-524-0	126,000 GALLONS	3020-05 E	1	296.00	296.00	A	3,000 BBL WASTEWATER TANK #T-5 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 MIDWAY SUNSET FIELD 15A TANK BATTERY)
S-1372-525-0	12.3 MMBtu/hr	3020-02 G	1	980.00	980.00	A	12.3 MMBTU/HR NATURAL GAS-FIRED NATCO MODEL VFH-RM, SERIAL NO. ELIN22901-01 HEATER TREATER V-1 WITH TWO 6.15 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS WITH VAPOR RECOVERY PIPING TO S-1372-521
S-1372-526-0	12.3 MMBtu/hr	3020-02 G	1	980.00	980.00	A	12.3 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER V-2 WITH WITH TWO 6.15 MMBTU/HR MAXON MODEL XPO 5 PB BURNERS WITH VAPOR RECOVERY PIPING TO S-1372-521
S-1372-527-0	4,488 GALLONS	3020-05 A	1	91.00	91.00	A	WEMCO AIR FLOTATION UNIT #W-1 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)
S-1372-528-0	42,000 GALLONS	3020-05 C	1	165.00	165.00	A	1,000 BBL SUMP REPLACEMENT TANK #T-9 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)
S-1372-529-0	42,000 GALLONS	3020-05 C	1	165.00	165.00	A	1,000 BBL SUMP REPLACEMENT TANK #T-10 WITH VAPOR RECOVERY SYSTEM SHARED WITH TANK S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)
S-1372-530-0	220 wells	3020-09 A	220	11.23	2,470.60	A	20 STEAM ENHANCED CRUDE OIL PRODUCTION WELLS, AND THERMALLY ENHANCED OIL RECOVERY OPERATION AND WELL-VENT VAPOR CONTROL SYSTEM INCLUDING SEPARATORS, COLLECTORS, COOLERS, AND COMPRESSORS
S-1372-531-0	138,600 gallons	3020-05 E	1	296.00	296.00	A	3,300 BARREL LACT TANK WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513
S-1372-533-0	126,000 gallon tank	3020-05 E	1	296.00	296.00	A	3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)

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S-1372-534-0	126,000 gallon tank	3020-05 E	1	296.00	296.00	A	3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)
S-1372-535-0	126,000 gallon tank	3020-05 E	1	296.00	296.00	A	3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521
S-1372-536-0	77.6 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	77.6 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN MAGNA FLAME LE BURNER AND O2 CONTROLLER
S-1372-537-0	21,000 gallon	3020-05 C	1	165.00	165.00	A	500 BBL FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513
S-1372-538-0	21,000 gallon	3020-05 C	1	165.00	165.00	A	1000 BBL FIXED ROOF PETROLEUM STORAGE TANK CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-513
S-1372-539-0	85.0 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A NORTH AMERICAN LOW-NOX LEL BURNER AUTHORIZED TO BE OPERATED AT VARIOUS SPECIFIED LOCATIONS
S-1372-540-0	4,495 Gallon WEMCO unit	3020-05 A	1	91.00	91.00	A	107 BBL WEMCO MODEL 66 DEPURATOR WITH VAPOR PIPING TO SHARED VAPOR RECOVERY SYSTEM LISTED ON TANK PERMIT S-1372-513 (SECURITY LEASE)
S-1372-541-0	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR PCL NATURAL GAS AND WASTE GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION AUTHORIZED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS
S-1372-542-0	3.0 MMBtu/hr	3020-02 F	1	731.00	731.00	A	3.0 MMBTU/HR LEASE GAS-FIRED PROCESS HEATER/BOILER WITH ECLIPSE WINNOX WX0300 LOW NOX BURNER - STAR SECURITY LEASE
S-1372-543-0	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR PCL NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM
S-1372-544-0	3,000 bbl (126,000 gal)	3020-05 E	1	296.00	296.00	A	3,000 BBL (126,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK #T-3 CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1372-521 (MIDWAY SUNSET FIELD 15A TANK BATTERY)
S-1372-545-0	85 MMBtu/hr	3020-02 H	1	1,238.00	1,238.00	A	85 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LEL ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM
S-1372-546-0	138,600 gallon	3020-05 E	1	296.00	296.00	A	3,300 BBL FIXED ROOF CRUDE OIL LACT TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON TANK S-1372-521
S-1372-547-0	750 bbl	3020-05 C	1	165.00	165.00	A	750 BBL FIXED ROOF HOT PRODUCED WATER TANK T-8 SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1372-521
S-1372-548-0	100 wells w/ vapor recovery	3020-09 A	100	11.23	1,123.00	A	100 STEAM-ENHANCED CRUDE OIL PRODUCTION WELLS WITH CLOSED CASING VENTS

Detailed Facility Report
For Facility=1372 and excluding Deleted Permits
Sorted by Facility Name and Permit Number

PERMIT NUMBER	FEE DESCRIPTION	FEE RULE	QTY	FEE AMOUNT	FEE TOTAL	PERMIT STATUS	EQUIPMENT DESCRIPTION
S-1372-549-0	2,873 gallons	3020-05 A	1	91.00	91.00	A	WEMCO UNIT WITH VAPOR RECOVERY SYSTEM LISTED ON PERMIT UNIT S-1372-521
S-1372-550-0	50,400 gallons	3020-05 D	1	223.00	223.00	A	1,200 BBL FREEWATER KNOCKOUT (FWKO) VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-1372-517
S-1372-551-0	50,400 gallons	3020-05 D	1	223.00	223.00	A	1,200 BBL FREEWATER KNOCKOUT (FWKO) VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-1372-517
S-1372-552-0	50,400 gallons	3020-05 D	1	223.00	223.00	A	1,200 BBL FREEWATER KNOCKOUT (FWKO) VESSEL SERVED BY THE VAPOR CONTROL SYSTEM LISTED ON S-1372-517
S-1372-554-0	126,000 gallons	3020-05 E	1	296.00	296.00	A	3,000 BBL FIXED ROOF CRUDE OIL STORAGE TANK #10841 WITH VAPOR PIPING TO VAPOR CONTROL SYSTEM ON PERMIT S-1372-513 (SECURITY LEASE)

Number of Facilities Reported: 1